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KITS.USPT.	17556
(2 AND KIT).USPT.	184
(L2 AND (KIT)).USPT.	184

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US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

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L3	L2 and (kit)	184	L3
L2	L1 and (immunoassay or method)	398	L2
L1	bacillus anthracis	403	L1

END OF SEARCH HISTORY

Baskar, P.
09/754947

-Key terms

FILE 'CAPLUS' ENTERED AT 10:07:28 ON 26 MAR 2002
L1 113 SEA ABB=ON PLU=ON ((BACILL? OR B)(W)ANTHRACIS)(5A)(DETERM? OR DETECT? OR DET## OR SCREEN?)
L2 20 SEA ABB=ON PLU=ON L1 AND (ANTIBOD? OR MAB OR MOAB)

L2 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:816741 CAPLUS
DOCUMENT NUMBER: 135:356770
TITLE: Anthrax specific **antibodies**
INVENTOR(S): Mangold, Beverly L.; Aldrich, Jennifer L.; O'Brien, Thomas W.
PATENT ASSIGNEE(S): Tetracore, L.L.C., USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083561	A2	20011108	WO 2001-US13648	20010430

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-200505P P 20000428

AB The present invention is directed to diagnostic tools and therapies using **antibodies** to Bacillus anthracis. Specifically, the present invention is directed to a B. anthracis-specific monoclonal **antibody** that binds to the EA1 antigen (corresponding to the eag gene) of the S-layer (surface layer) of spores. This monoclonal **antibody** may be used in a variety of applications, including to specifically **detect** and diagnose **B. anthracis**. Preferably, **antibodies** are monoclonal and bind to a surface protein, such as EA1 protein, on the spores of B. anthracis, and not to spores of either B. cereus or B. thuringiensis. **Antibodies** can be incorporated into detection kits using, for example, colloidal particle based lateral flow detection system. Such detection kits can distinguish anthrax spores from non-pathogenic varieties of spores. In addn., the invention is directed to B. anthracis EA1 antigen and pharmaceuticals such as vaccines that can be used as therapeutics and to develop improved **antibodies** and detection methods.

L2 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:590706 CAPLUS
DOCUMENT NUMBER: 135:148379
TITLE: Bacillus spore inactivation methods affect detection assays
AUTHOR(S): Dang, Jessica L.; Heroux, Karen; Kearney, John;

Arasteh, Ameneh; Gostomski, Mark; Emanuel, Peter A.
CORPORATE SOURCE: Geo-Centers, Inc., Lanham, MD, 20706, USA
SOURCE: Applied and Environmental Microbiology (2001), 67(8), 3665-3670
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Detection of biol. weapons is a primary concern in force protection, treaty verification, and safeguarding civilian populations against domestic terrorism. One great concern is the **detection** of **Bacillus anthracis**, the causative agent of anthrax. Assays for detection in the lab. often employ inactivated prepns. of spores or nonpathogenic simulants. This study uses several common biodetection platforms to **detect B**. **anthracis** spores that have been inactivated by two methods and compares those data to detection of spores that have not been inactivated. The data demonstrate that inactivation methods can affect the sensitivity of nucleic acid- and **antibody**-based assays for the **detection** of **B**. **anthracis** spores. These effects should be taken into consideration when comparing lab. results to data collected and assayed during field deployment.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:507824 CAPLUS
DOCUMENT NUMBER: 135:104688
TITLE: Assays for **detection** of **Bacillus anthracis**
INVENTOR(S): Lee, Bruce Andrew; Flores, Becky Mar; Valkirs, Gunars Edwin
PATENT ASSIGNEE(S): Biosite Diagnostics, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049823	A2	20010712	WO 2001-US358	20010104
WO 2001049823	A3	20011220		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-174901P P 20000106
AB This invention provides novel methods, reagents, and kits that are useful for **detecting B. anthracis**.
The methods are based on the discovery of binding agents, including recombinant polyclonal **antibodies**, which bind to the surface array protein of B. anthracis.

L2 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:434372 CAPLUS
DOCUMENT NUMBER: 136:129988
TITLE: Detection and identification of animal and food pathogens using time-resolved fluorescence
AUTHOR(S): Andreotti, Peter E.; Meyer, Richard; Campbell, Thomas; Goode, Michael T.; Menking, Deborah L.; Myers, Emily D.; Palenius, Tom; Stanker, Larry H.
CORPORATE SOURCE: PerkinElmer Life Sciences, Wallac Inc., Gaithersburg, MD, 20877, USA
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2001), 4206(Photonic Detection and Intervention Technologies for Safe Food), 48-57
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Time-resolved fluorescence immunoassays using dissocn. enhanced lanthanide fluorescence have been developed for detection and identification of animal and food pathogens including Clostridium botulinum toxins A and B, Staphylococcus enterotoxin B, Bacillus anthracis, E. Coli O157:H7, Salmonella, Listeria and Campylobacter. Both double **antibody** sandwich immunoassays and microwell filterplate assays have been developed using polyclonal, monoclonal and phage display **antibodies** labeled with fluorescent europium or samarium lanthanide chelates. Multiplexed dual label europium and samarium assays have been performed for Salmonella simultaneously with E. Coli O157:H7, Salmonella and Listeria. Results from different labs. are presented to demonstrate that these time-resolved fluorescent immunoassays have high sensitivity and specificity with excellent reproducibility.
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:43941 CAPLUS
DOCUMENT NUMBER: 134:203535
TITLE: Simultaneous detection of six biohazardous agents using a planar waveguide array biosensor
AUTHOR(S): Rowe-Taitt, C. A.; Hazzard, J. W.; Hoffman, K. E.; Cras, J. J.; Golden, J. P.; Ligler, F. S.
CORPORATE SOURCE: Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington, DC, 20375-5348, USA
SOURCE: Biosensors & Bioelectronics (2000), 15(11-12), 579-589
CODEN: BBIOE4; ISSN: 0956-5663

PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recently, we demonstrated that an array biosensor could be used with cocktails of fluorescent **antibodies** to perform three assays simultaneously on a single substrate, and that multiple samples could be analyzed in parallel. We extend this technol. to demonstrate the simultaneous anal. of six samples for six different hazardous analytes, including both bacteria and protein toxins. The level of **antibody** cross-reactivity is explored, revealing a possible common epitope in two of the toxins. A panel of environmental interferents was added to the samples; these interferents neither prevented the detection of the analytes nor caused false-pos. responses.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:772797 CAPLUS
DOCUMENT NUMBER: 133:345529
TITLE: Primer extension on a microarray of gel-immobilized primers
INVENTOR(S): Dubiley, Svetlana; Kirillov, Eugene; Mirzabekov, Andrei
PATENT ASSIGNEE(S): University of Chicago, USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000065098	A2	20001102	WO 2000-US11286	20000425
WO 2000065098	A3	20010719		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1171637	A2	20020116	EP 2000-928451	20000425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-300675 A 19990427
WO 2000-US11286 W 20000425

AB Methods and compns. have been developed for nucleotide extension of primers immobilized within gel pads on a microchip using multibase primers or multiple sets of primers, or combinations thereof. Mols. or parts of mols. are identified. The effect of the different temp., reaction time are tested. The single base extension was amplified by carrying out the reaction under elevated temp. The invention is exemplified by **detecting B**.

anthracis toxin gene (pag or lef) , diagnosing seven commonly occurring .beta.-thalassemia mutations within .beta.-globin gene, and detecting a specific **antibody** in a library of **antibodies** by coupling each **antibody** with labeled nucleic acid tags. The method is useful to detect single nucleotide mutations for genetic diagnosis, and specific **antibody** to a particular antigen.

L2 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:416585 CAPLUS
DOCUMENT NUMBER: 133:330595
TITLE: Evanescent planar waveguide detection of biological warfare simulants
AUTHOR(S): Sipe, David M.; Schoonmaker, Kenneth P.; Herron, James N.; Mostert, Michael J.
CORPORATE SOURCE: IVD Systems, LLC, Santa Barbara, CA, USA
SOURCE: Proc. SPIE-Int. Soc. Opt. Eng. (2000), 3913(In-Vitro Diagnostic Instrumentation), 215-222
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An evanescent planar waveguide Mark 1.5 instrument was used to detect simulants of biol. warfare agents; ovalbumin (OV), MS2 bacteriophage, BG, and Erwinia herbicola (EH). Polyclonal tracer **antibodies** were labeled with the fluorescent dye, Cy5. Discrete bands of polyclonal capture **antibodies** were immobilized to a polystyrene planar waveguide with molded integral lenses. An ST-6 CCD camera was used for detection. OV, MS2 and BG were detected in a simultaneous 3 X 3 array; with a total of nine measurements within 6 min. EH was analyzed in a sep. array. Results were evaluate dat the US Army Joint Field Trials V, at the Dugway Proving Grounds. Over a 10 day period, 32 unknown samples were analyzed daily for each simulant. Detection limits: OV 10 ng/mL, MS2 107 pfu/mL, BG 105 cfu/mL. EH was detectable at 5 X 105 cfu/mL. Overall false positives were 3.0 percent. Therefore, the Mark 1.5 instrument, with a parallel array of detectors, evanescent fluorescent excitation, and CCD imaging provides for rapid, sensitive, and specific detection of biol. warfare agent simulants.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:108396 CAPLUS
DOCUMENT NUMBER: 132:232808
TITLE: Array biosensor for detection of biohazards
AUTHOR(S): Rowe-Taitt, Chris A.; Golden, Joel P.; Feldstein, Mark J.; Cras, John J.; Hoffman, Karen E.; Ligler, Frances S.
CORPORATE SOURCE: Naval Research Laboratory, Center for Bio/Molecular Science and Engineering, Code 6900, Washington, DC, 20375-5348, USA
SOURCE: Biosens. Bioelectron. (2000), 14(10-11), 785-794
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fluorescence-based biosensor has been developed for simultaneous anal. of multiple samples for multiple biohazardous agents. A patterned array of **antibodies** immobilized on the surface of a planar waveguide is used to capture antigen present in samples; bound analyte is then quantified by means of fluorescent tracer **antibodies**. Upon excitation of the fluorophore by a small diode laser, a CCD camera detects the pattern of fluorescent **antibody**:antigen complexes on the waveguide surface. Image anal. software correlates the position of fluorescent signals with the identity of the analyte. This array biosensor has been used to detect toxins, toxoids, and killed or non-pathogenic (vaccine) strains of pathogenic bacteria. Limits of detection in the mid-ng/mL range (toxins and toxoids) and in the 103 - 106 cfu/mL range (bacterial analytes) were achieved with a facile 14-min off-line assay. In addn., a fluidics and imaging system has been developed which allows automated detection of staphylococcal enterotoxin B (SEB) in the low ng/mL range.
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:373175 CAPLUS
DOCUMENT NUMBER: 126:339714
TITLE: Preliminary testing and assay development for biotoxoids, viruses and bacterial spores using the ORIGEN immunomagnetic electrochemiluminescence sensor
AUTHOR(S): Gatto-Menking, Deboral L.; Yu, Hao; Bruno, John G.; Goode, Michael T.; Miller, Maryalice; Zulich, Alan W.
CORPORATE SOURCE: Science Technology Corp., Edgewood, MD, USA
SOURCE: Proc. ERDEC Sci. Conf. Chem. Biol. Def. Res. (1996), Meeting Date 1994, 229-236. Editor(s): Berg, Dorothy A. National Technical Information Service: Springfield, Va.
CODEN: 64NAAX
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Sensitive and semiautomated detection of various biotoxoids was achieved by capture on **antibody**-coated micron-sized magnetic beads with concurrent binding of Ruthenium (II) tris-bipyridal chelate (Ru(bpy)32+)-labeled reporter **antibodies**. The electrochemiluminescence (ECL) signal from the magnetically captured complexes was detected by the com. available ORIGEN (Igen Corp.) device. Femtogram sensitivity levels were noted for all biotoxoids tested including Botulinus A (.ltoreq. 2.5 fg), the Cholera .beta. subunit (< 25 fg), Ricin (< 25 fg), Staphylococcal Enterotoxoid B (< 25 fg). Venezuelan Equine Encephalitis (VEE) virus was detected, but with unknown sensitivity. **Bacillus anthracis** Sterne strain spores were **detected** to the level of at least 100 spores. The toxoid detection limits are at least an order of magnitude lower than results obtained with any other com. detection system except radio-immunoassay. All assays were performed with a total reaction time of 20-40 mins. and an assay time of approx. 1.5 mins. per tube.

Data also suggested that the toxin assay reagents could by lyophilized together in a single tube and reconstituted without appreciable loss of reactivity. However, lyophilization also appeared to cause an increase in nonspecific binding between the reporter **antibody** and other components of the assay. The combination of potentially single-step sandwich reactions, rapid and facile assays with extreme sensitivity make the ORIGEN device an attractive option for rapid clin. diagnostics as well as biol. and chem. detection in a variety of settings.

L2 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:680202 CAPLUS
DOCUMENT NUMBER: 123:76510
TITLE: Sensitive detection of biotoxoids and bacterial spores using an immunomagnetic electrochemiluminescence sensor
AUTHOR(S): Gatto-Menking, Deborah L.; Yu, Hao; Bruno, John G.; Goode, Michael T.; Miller, Maryalice; Zulich, Alan W.
CORPORATE SOURCE: Science Technology Corp., Edgewood, MD, 21040, USA
SOURCE: Biosens. Bioelectron. (1995), 10(6/7), 501-7
CODEN: BBIOE4; ISSN: 0956-5663
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Extremely sensitive detection of various biotoxoids and bacterial spores using the com. ORIGEN analyzer was achieved by capture on **antibody**-conjugated micron sized magnetic beads (MBs) followed by binding of ruthenium(II) trisbipyridal chelate (Ru(bpy)32+)-labeled reporter **antibodies**. Immunomagnetically captured target materials were collected on a magnet. Electrochemiluminescence (ECL) was evoked from the Ru(bpy)32+-tagged reporter **antibodies** by application of an elec. potential. Femtogram sensitivity levels were obtained for all biotoxoids tested including botulinus A, cholera .beta. subunit, ricin and staphylococcal enterotoxoid B by this immunomagnetic (IM)-ECL approach. An IM-ECL assay for **Bacillus anthracis** spores yielded a **detection** limit of at least 100 spores. The ECL signal was a function of analyte quantity over several orders of magnitude, but the immunol. 'hook' effect at high antigen loads made quantitation impossible over a broader range. All assays were performed with a max. combined incubation and assay time of approx. 40 min. This work demonstrates the extreme sensitivity of the IM-ECL approach for sol. and particulate antigens.

L2 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:696625 CAPLUS
DOCUMENT NUMBER: 121:296625
TITLE: Optical immunoassay for microbial analytes using nonspecific dyes
INVENTOR(S): Ligler, Francis S.; Shriver, Lisa C.; Wijesuriva, Dayaweera
PATENT ASSIGNEE(S): United States Dept. of the Navy, USA
SOURCE: U. S. Pat. Appl., 36 pp. Avail. NTIS Order No. PAT-APPL-8-102 933.
CODEN: XAXXAV
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 102933	A0	19940501	US 1993-102933	19930806
US 5496700	A	19960305		
WO 9504930	A1	19950216	WO 1994-US8752	19940804
W: CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2169267	AA	19950216	CA 1994-2169267	19940804
EP 712494	A1	19960522	EP 1994-925171	19940804
R: DE, FR, GB				

PRIORITY APPLN. INFO.: US 1993-102933 19930806
WO 1994-US8752 19940804

AB The presently disclosed invention relates to a method of rapid detection and identification of microorganisms including bacteria, viruses, rickettsiae and fungi. The method involves staining all microorganisms or fragments thereof in a sample. The stained sample is introduced onto a surface coated with a capture mol. specific for the microorganism of interest, and the bound microorganism or fragment thereof is then optically detected. **Bacillus anthracis** and Salmonella were **detected** by staining with Nile Red and ethidium bromide, resp., and using fiber optic fluorimeters having immobilized specific **antibody**. **Detection** of **B. anthracis** and Salmonella was achieved in times of approx. one minute. The sensitivity of this method is on the order of about 3 cells/.mu.L.

L2 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:528996 CAPLUS
DOCUMENT NUMBER: 121:128996
TITLE: Progress in fiber-optic based biosensors at the United States Naval Research Laboratory
AUTHOR(S): Mauro, J. Matthew; Golden, Joel P.; Anderson, George P.; Ogert, Robert A.; Wijesuriya, Daya; Shriver-Lake, Lisa C.; Ligler, Frances S.
CORPORATE SOURCE: Nav. Res. Lab., Cent. Biomol. Sci. and Eng., Washington, DC, 20375, USA
SOURCE: NATO ASI Ser., Ser. E (1993), 252(USES OF IMMOBILIZED), 351-7
CODEN: NAESDI; ISSN: 0168-132X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A fiber-optic based biosensor has been developed which integrates a novel array of biol., optical, and elec. components. Distally tapered, chem. activated glass fibers are coated with **antibodies** specific for desired analytes. A sandwich immunoassay is performed by exposing a fiber to a soln. of analyte contg. a second, analyte-specific and fluorescently labeled **antibody**. Fluorescent light emitted from **antibody**/analyte complexes bound within the evanescent region of the laser illuminated tapered fiber is optically filtered and electronically quantitated. Assays for botulism and ricin toxins, as well as specific **detection** of fluorescently-stained **Bacillus anthracis** cells, are described.

L2 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:406779 CAPLUS
DOCUMENT NUMBER: 121:6779
TITLE: enzyme-linked immunosorbent assay using a recombinant baculovirus-expressed Bacillus anthracis protective antigen (PA): measurement of human anti-PA **antibodies**
AUTHOR(S): Iacono-Connors, Lauren C.; Novak, Jeanne; Rossi, Cindy; Mangiafico, Joseph; Ksiazek, Thomas
CORPORATE SOURCE: Virol. Div., U.S. Army Med. Res. Inst. Infect. Dis., Fort Detrick, MD, 21702-5011, USA
SOURCE: Clin. Diagn. Lab. Immunol. (1994), 1(1), 78-82
CODEN: CDIMEN; ISSN: 1071-412X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An antigen capture ELISA was developed which does not require purified protective antigen (PA) for **detection** of human **antibodies** to **Bacillus anthracis** PA. Lysates of Spodoptera frugiperda (Sf-9) cells infected with recombinant baculovirus contg. the PA gene were used as the source of PA to develop the ELISA. Recombinant PA from crude Sf-9 cell lysates or PA purified from B. anthracis Sterne strain was captured by an anti-PA monoclonal **antibody** coated onto microtiter plates. Human serum **antibody** titers to PA were identical in the ELISA whether crude Sf-9 cell lysates contg. recombinant baculovirus-expressed PA or purified Sterne PA was used. Finally, false-pos. results obsd. in a direct ELISA were eliminated with this antigen capture ELISA. Thus, the antigen capture ELISA with crude prepns. of baculovirus-expressed PA is reliable, safe, and inexpensive for detg. anti-PA **antibody** levels in human sera.

L2 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:67103 CAPLUS
DOCUMENT NUMBER: 104:67103
TITLE: Serum stimulation and repression of flow immunofluorescence staining of bacteria
AUTHOR(S): Phillips, A. P.; Martin, K. L.
CORPORATE SOURCE: CDE, Salisbury/Wiltshire, UK
SOURCE: J. Immunol. Methods (1985), 84(1-2), 303-11
CODEN: JIMMBG; ISSN: 0022-1759
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A flow cytometer was used to measure the fluorescence intensity of Bacillus anthracis spores, B. subtilis spores, and Escherichia coli stained in suspension with specific rabbit fluorescein-conjugated **antibody**. The effect of normal sera and a no. of other additives on the binding of conjugate to the surface of the homologous bacteria was assessed by measuring the median fluorescence intensity of the bacterial population in the reaction mixt. Nonionic detergent depressed binding of one conjugate (anti-E. coli) by up to 22%. Bovine serum albumin, gelatin, fetal calf serum and normal rabbit serum did not affect the median fluorescence value for these 3 bacterial species by more than 14%. Normal serum from 5 goats reduced the specific staining of B. anthracis by up to two-thirds. Anti-**B. anthracis** **antibodies** were **detected** in goat serum by indirect

immunofluorescence microscopy, and it is inferred that these goat **antibodies** were in competition with fluorescein conjugate for the bacterial antigens. Normal goat and sheep serum stimulated the specific staining of B. subtilis and E. coli measured by the cytometer; in the case of goat serum previous heating of the serum to 56.degree. resulted in repression of staining of E. coli. Since anti-E. coli **antibody** was detected in this normal sera by indirect immunofluorescence assays, it is proposed that repression was caused by anti-bacterial **antibodies** and stimulation by a sep. factor, heat-labile in the case of goat serum. The stimulatory factor was also apparently inactivated by increasing the NaCl concn., suggesting that stimulation depends heavily on charge interactions. Preliminary evidence is presented that the stimulatory factor may be anti-**antibody**, possibly of the IgA or IgG class.

L2 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:528525 CAPLUS
DOCUMENT NUMBER: 101:128525
TITLE: Comparison of enzyme-linked immunosorbent and indirect hemagglutination assays for determining anthrax **antibodies**
AUTHOR(S): Johnson-Winegar, Anna
CORPORATE SOURCE: Dep. Appl. Toxinol., U.S. Army Med. Res. Inst. Infect. Dis., Frederick, MD, 21701, USA
SOURCE: J. Clin. Microbiol. (1984), 20(3), 357-61
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An enzyme-linked immunosorbent assay has been established to measure anthrax **antibody** titers. The protective antigen component of anthrax toxin was used as the capture antigen. Two types of conjugates (protein A-horseradish peroxidase and anti-human IgG plus IgA plus IgM-horseradish peroxidase) were tested. Results from enzyme-linked immunosorbent assay testing were compared with those from indirect hemagglutination titers on serum from vaccines. The overall trend of enzyme-linked immunosorbent assay and indirect hemagglutination titer was significant. The enzyme-linked immunosorbent assay offered speed, precision, and reduced cost per test.

L2 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:595696 CAPLUS
DOCUMENT NUMBER: 97:195696
TITLE: New immunofluorescent procedure for rapid determination of antibiotic sensitivity in microorganisms
AUTHOR(S): D'yakov, S. I.; Lebedeva, I. K.; Lisin, V. V.; Grishin, G. I.
CORPORATE SOURCE: S. M. Kirov Mil. Med. Acad., Leningrad, USSR
SOURCE: Antibiotiki (Moscow) (1982), 27(10), 761-6
CODEN: ANTBAL; ISSN: 0003-5637
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The title method is based on direct inoculation of the clin. specimen to an agar medium contg. various concns. of the antibiotics tested. After incubation for 6-7 h, the agar is treated with fluorescent **antibodies**, examd. with fluorescent

microscope, and compared with controls (agar treated similarly but contg. no antibiotic). The procedure does not require isolation of the organism in pure culture. The min. inhibitory concns. for 11 **antibodies** were **detd.** with an attenuated **Bacillus anthracis** strain as test-organism.

L2 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1974:25755 CAPLUS
DOCUMENT NUMBER: 80:25755
TITLE: Protective Bacillus anthracis antigen studied in order to use it in diagnosis
AUTHOR(S): Siromashkova, M.; Vylchev, V.; Avramova, S.; Mircheva, I.
CORPORATE SOURCE: Inst. Epidemiol. Microbiol., Sofia, Bulg.
SOURCE: Zh. Mikrobiol., Epidemiol. Immunobiol. (1973), (10), 130-3
CODEN: ZMEIAV
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The protective anthrax antigen (ag) from a filtrate of avirulent Siberian anthrax strain STI-1 was prepd. This material was heterogeneous, i.e., it contained 2 thermolabile and 1 thermostable fractions. One of the former was the carrier of the specific protective properties, while the thermostable fraction was identical with the polysaccharide ag prepd. previously from these microorganisms by the Morgan-Boiven method. The immunol. properties were tested on guinea pigs at 7-day intervals by injection, and the **antibody** titer in the serum was detd. at various intervals. This ag was suitable for use in the latex and hemagglutination reactions for serodiagnosis of anthrax.

L2 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1972:486471 CAPLUS
DOCUMENT NUMBER: 77:86471
TITLE: Assessment of antianthrax immunity by preventive properties of the serum. I
AUTHOR(S): Burgasov, P. N.; Rozhkov, G. I.
CORPORATE SOURCE: USSR
SOURCE: Zh. Mikrobiol., Epidemiol. Immunobiol. (1972), 49(6), 124-34
CODEN: ZMEIAV
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB A method of detection of preventive anthrax **antibodies** in mice permitting detn. of the state of immunity and the content of **antibodies** in the sera (in conditioned activity units) was developed. Using this method it is possible to det. (by the index of preventive activity of the sera under study) the immunol. reconstruction of the organism under the effect of vaccination. A new scheme of primary immunization-a double s.c. injection of STI vaccine in a dose of 50 million spores, at an interval of 20-30 days between the injections, is recommended. Revaccination should be given once a year with the same dose of the vaccine.

L2 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1972:2404 CAPLUS
DOCUMENT NUMBER: 76:2404
TITLE: Anthrax indirect microhemagglutination test

AUTHOR(S): Buchanan, Thomas M.; Feeley, James C.; Hayes, Peggy S.; Brachman, Philip S.
CORPORATE SOURCE: Cent. Dis. Control, Health Serv. Ment. Health Adm., Atlanta, Ga., USA
SOURCE: J. Immunol. (1971), 107(6), 1631-6
CODEN: JOIMA3
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new application of the indirect microhemagglutination (IMH) test was developed for anthrax. The antigen was prepd. by DEAE-cellulose, Dowex 1-X1, and Sephadex G-50 column chromatog. of a culture filtrate of the avirulent, nonproteolytic, nonencapsulated Vollum strain of Bacillus anthracis grown anaerobically in a chem. defined liq. medium. Tanned, sensitized sheep red blood cells (SRBC) were tested with complement-inactivated SRBC-absorbed serum samples from 72 anthrax patients, 91 persons who had been vaccinated against anthrax, and 103 controls. The IMH test detected **antibodies** in 93 of patients, 98 of vaccinees, and none of the controls. Run-to-run reproducibility was 76 within one 2-fold diln., and 93 within 2 2-fold dilns. The IMH test proved more sensitive and less time-consuming than the currently used agar-gel pptn. inhibition test.

L2 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1962:69369 CAPLUS
DOCUMENT NUMBER: 56:69369
ORIGINAL REFERENCE NO.: 56:13415f-i,13416a
TITLE: Studies on the nonspecific precipitation of basic serum proteins with .gamma.-glutamyl polypeptides
AUTHOR(S): Leonard, C. Gomez; Thorne, Curtis B.
CORPORATE SOURCE: Fort Detrick, MD
SOURCE: J. Immunol. (1961), 87, 175-88
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. CA 53, 16282a. In rabbits injected with encapsulated cells of **Bacillus anthracis** no **antibody** could be **detected** to the .gamma.-D-glutamyl polypeptide (I) isolated from this organism. However, the serum of these rabbits, as well as antiserums to a variety of antigens unrelated to B. anthracis, contained basic proteins which pptd. I in agar diffusion tests and which reacted with I in complement-fixation reactions. The pptn. reactions in agar were stronger and more pptn. arcs were noted at pH 6.0 than 7.0. The nonspecific pptn. reactions could also be demonstrated in aq. soln. and were stronger in water and diminished with increasing NaCl concns. Egg white lysozyme exhibited the same reactions with I as the nonspecific precipitin in antiserum. Deoxyribonucleic acid (DNA) pptd. most of the material from serum that reacted with I and, conversely, I pptd. the material reacting with DNA. Complement was fixed by the complexes formed between DNA and serum proteins, and between DNA and lysozyme. Most of the serum protein that reacted with I could be removed by adsorption on bentonite. It was shown that the concn. of this protein in serum increased following injection of a variety of antigens. A prepn. of this protein obtained by fractionation of serum with MeOH showed lysozyme activity, and it as well as egg white lysozyme conjugated with fluorescein stained encapsulated, but not nonencapsulated, strains of B. anthracis. Thus, this basic serum protein which ppts.

I appears to be serum lysozyme.

[redacted]LINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
[redacted]US, JAPIO' ENTERED AT 10:09:41 ON 26 MAR 2002)
L3 52 S L2
L4 [redacted] L3 (24 DUPLICATES REMOVED)

L4 ANSWER 1 OF 28 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-055457 [07] WPIDS
DOC. NO. NON-CPI: N2002-040873
DOC. NO. CPI: C2002-015873
TITLE: Novel monoclonal **antibody**, useful for **detecting B.anthracis**, and for treating **B.anthracis** infection, is specifically reactive against Bacillus anthracis and is non-reactive with B.thuringinesis and B.cereus.
DERWENT CLASS: B04 C06 D16 S03
INVENTOR(S): ALDRICH, J L; MANGOLD, B L; O'BRIEN, T W
PATENT ASSIGNEE(S): (TETR-N) TETRACORE LLC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001083561	A2	20011108	(200207)*	EN	27

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001083561	A2	WO 2001-US13648	20010430

PRIORITY APPLN. INFO: US 2000-200505P 20000428
AN 2002-055457 [07] WPIDS
AB WO 200183561 A UPAB: 20020130
NOVELTY - A monoclonal **antibody** (I) which is specifically reactive against Bacillus anthracis (Ba), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a isolated **antibody** (Ia) or its reactive portion, directed to EA1 protein of Bacillus anthracis (Ba);
(2) an **antibody** (II) which is specifically reactive against B.thuringiensis (Bt) and non-reactive against B.cereus (Bc) and Ba;
~~(3) an **antibody** (III) specifically reactive against B.cereus (Bc) and non-reactive against Ba or Bt;~~
(4) a hybridoma (IV) that produces (I);
(5) an **antibody** isolated from (IV);
(6) a diagnostic kit (V) comprising an **antibody** that

is specifically reactive against spores or vegetative cells of Ba, Bc, or Bt;

(7) a diagnostic kit comprising an **antibody** that is specifically reactive against spores of Ba and not Bt, and incorporating a colloidal particle based lateral flow detection system;

(8) a diagnostic kit comprising an **antibody** that is specifically reactive against spores of Bt and not Ba, and incorporating a colloidal particle based lateral flow detection system;

(9) producing (M1) species-specific monoclonal **antibody** to one species of Bacillus, comprising:

(i) immunizing a host with a preparation of one species of Bacillus;

(ii) boosting the host with another preparation of an antigenically similar, but not identical species of Bacillus;

(iii) boosting the host with the preparation of the (I) species;

(iv) fusing the **antibody**-producing cells from the host with immortalized cells; and

(v) selecting a hybridoma that produces species specific monoclonal **antibody** to the one species of Bacillus;

(10) a species-specific monoclonal **antibody** (VI) to spores of Ba made by (M1);

(11) a diagnostic kit comprising (VI);

(12) a hybridoma that expresses (VI);

(13) an isolated or recombinant antigen (VII), or its antigenically active portions comprising an EA1 protein of the surface layer of Ba;

(14) a pharmaceutical composition comprising (VII) or its active portions and a carrier;

(15) a vaccine (VIII) against Ba comprising (VII), or its active portion; and

(16) a therapeutic agent (IX) comprising **antibodies** to the EA1 protein.

ACTIVITY - Antibacterial. No biological data was provided.

MECHANISM OF ACTION - Vaccine. No biological data was provided.

USE - (VII) is useful as a target for an immunological detection system for Ba. (VIII) is useful for vaccinating against Ba. (IX) is useful for treating, preventing or controlling Ba infection (all claimed). (I) is useful for detecting and diagnosing Ba.

ADVANTAGE - (I) is highly specific for Ba, and can distinguish Ba from closely related non-pathogenic species.

Dwg.0/2

L4 ANSWER 2 OF 28 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-418358 [44] WPIDS
DOC. NO. CPI: C2001-126594
TITLE: Novel methods and kits for **detecting** the presence of **Bacillus anthracis** in a test sample.
DERWENT CLASS: B04 D16
INVENTOR(S): FLORES, B M; LEE, B A; VALKIRS, G E
PATENT ASSIGNEE(S): (BIOS-N) BIOSITE DIAGNOSTICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001049823	A2	20010712	(200144)*	EN	60
AU 2001052877	A	20010716	(200169)		

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001049823	A2	WO 2001-US358	20010104
AU 2001052877	A	AU 2001-52877	20010104

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001052877	A	Based on	WO 200149823

PRIORITY APPLN. INFO: US 2000-174901P 20000106

AN 2001-418358 [44] WPIDS

AB WO 200149823 A UPAB: 20010809

NOVELTY - **Detecting** the presence of **Bacillus anthracis** in a test sample, comprises contacting the sample with a capture reagent and detecting whether the a surface array protein is bound to the capture reagent, which is indicative of the presence of B. anthracis in the sample.

DETAILED DESCRIPTION - **Detecting** the presence or absence of **B. anthracis** in a test sample, comprises contacting a test sample with a capture reagent that can bind to a B. anthracis surface array protein, where the capture reagent forms a complex with the surface array protein if the surface array protein is present in the test sample, and detecting whether surface array protein is bound to the capture reagent, where the presence of surface array protein is indicative of the presence of B. anthracis.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit for **detecting** the presence or absence of **B. anthracis** in a sample, comprising a solid support upon which is immobilized a capture reagent that can bind to a surface array protein of **B. anthracis**, and a **detection** reagent which binds to the surface array protein; and

(2) a recombinant polyclonal **antibody** preparation that specifically binds to an antigenic determinant of a surface array protein of B. anthracis.

USE - The method and kit are useful for **detecting** the presence or absence of **B. anthracis** in a test sample (claimed).

ADVANTAGE - The kits and methods are a rapid, cost-effective means for **detecting B. anthracis**. The methods are also highly specific for B. anthracis unlike previously

available methods, they do not suffer from cross-reactivity with non-anthrax microorganisms. The methods are also easier to use because there is no need to disrupt the anthrax spores for binding reagents to bind their antigens.
Dwg.0/0

L4 ANSWER 3 OF 28 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001424934 MEDLINE
DOCUMENT NUMBER: 21365188 PubMed ID: 11472945
TITLE: Bacillus spore inactivation methods affect detection assays.
AUTHOR: Dang J L; Heroux K; Kearney J; Arasteh A; Gostomski M; Emanuel P A
CORPORATE SOURCE: Geo-Centers, Inc., Lanham, Maryland 20706, USA.. jessica.dang@sbccom.apgea.army.mil
SOURCE: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (2001 Aug) 67 (8) 3665-70.
Journal code: 6K6; 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20011029
Last Updated on STN: 20011029
Entered Medline: 20011025

AB Detection of biological weapons is a primary concern in force protection, treaty verification, and safeguarding civilian populations against domestic terrorism. One great concern is the **detection** of **Bacillus anthracis**, the causative agent of anthrax. Assays for detection in the laboratory often employ inactivated preparations of spores or nonpathogenic simulants. This study uses several common biodetection platforms to **detect B. anthracis** spores that have been inactivated by two methods and compares those data to detection of spores that have not been inactivated. The data demonstrate that inactivation methods can affect the sensitivity of nucleic acid- and **antibody**-based assays for the **detection** of **B. anthracis** spores. These effects should be taken into consideration when comparing laboratory results to data collected and assayed during field deployment.

L4 ANSWER 4 OF 28 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2001082224 MEDLINE
DOCUMENT NUMBER: 20538277 PubMed ID: 11084608
TITLE: The flow cytometry of Bacillus anthracis spores revisited.
AUTHOR: Stopa P J
CORPORATE SOURCE: The U.S. Army Edgewood Chemical and Biological Center, Aberdeen Proving Ground, Maryland 21010-5424, USA.. Peter.Stopa@sbccom.apgea.army.mil
SOURCE: CYTOMETRY, (2000 Dec 1) 41 (4) 237-44.
Journal code: D92. ISSN: 0196-4763.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101

ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010108

AB BACKGROUND: The potential use of Bacillus anthracis spores as a weapon of terror has rekindled interest in the rapid detection and identification of the spores of these bacteria. Prior efforts to utilize flow cytometry (FCM) for this purpose resulted in tedious and time-consuming protocols. Advances in rapid immunoassays suggest a reinvestigation of the use of FCM because this may allow for the development of a rapid and sensitive system for detection and/or identification of spores in suspect samples. METHODS: In this study, antiserum was raised in goats using three different strains of B. anthracis spores as the immunogen. The resultant **antibodies** were purified, labeled with fluorescein, and evaluated for use in an immunoassay on a Coulter Epics XL flow cytometer. In the protocol that was developed, fluorescein-labeled **antibodies** are simply mixed with the sample, allowed to incubate, and then analyzed on the flow cytometer. Washes and centrifugation were eliminated. RESULTS: The results showed that a rapid (5 min) and sensitive immunological analysis was feasible. The detection limit (approximately 10(3) colony-forming units [CFU]/ ml) varied with strain, but there was no difference in the detection limit between live and irradiated spores. In addition, the power of FCM was utilized to minimize false-positive reactions among similar species of Bacillus by placing constraints on scatter and fluorescence intensity. The data also suggest that scatter might be useful to determine spore viability. CONCLUSION: This study shows that FCM may be an effective platform on which to perform immunological analysis for the **detection** and/or presumptive identification of **B. anthracis** spores. Published 2000 Wiley-Liss, Inc.

L4 ANSWER 5 OF 28 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-104899 [09] WPIDS
DOC. NO. CPI: C2000-031369
TITLE: Peptide specific for an **antibody**, useful for treatment and diagnosis of systemic lupus erythematosus.
DERWENT CLASS: B04 D16
INVENTOR(S): DIAMOND, B A; GAYNOR, B D; SCHARFF, M D; VALADON, P
PATENT ASSIGNEE(S): (YESH) UNIV YESHIVA EINSTEIN COLLEGE
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6001964	A	19991214	(200009)*		13

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6001964	A	US 1995-531832	19950920

PRIORITY APPLN. INFO: US 1995-531832 19950920
AN 2000-104899 [09] WPIDS
AB US 6001964 A UPAB: 20000218

NOVELTY - A purified peptide (I) which binds to an anti-double-stranded DNA **antibody**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a peptide conjugate comprising (I) and a toxin;

(2) a peptide conjugate comprising (I) and a detectable marker; and

(3) a composition comprising (I).

ACTIVITY - Vulnerary.

No biological data.

MECHANISM OF ACTION - (I) neutralize **antibodies** important in the pathogenesis of systemic lupus erythematosus.

USE - (I) is useful for the treatment and diagnosis of systemic lupus erythematosus.

Dwg.0/3

L4 ANSWER 6 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 3

ACCESSION NUMBER: 2000:218183 BIOSIS
DOCUMENT NUMBER: PREV200000218183
TITLE: **Antibody**-based systems for the **detection** of **Bacillus anthracis** in environmental samples.
AUTHOR(S): Long, G. W. (1); O'Brien, T.
CORPORATE SOURCE: (1) Biological Defence Research Program, Naval Medical Research Institute, 8901 Wisconsin Avenue, Bethesda, MD, 20814 USA
SOURCE: Journal of Applied Microbiology, (Aug., 1999) Vol. 87, No. 2, pp. 214.
Meeting Info.: 3rd International Conference on Anthrax Plymouth, England, UK September 7-10, 1998
ISSN: 1364-5072.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 7 OF 28 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-259797 [23] WPIDS
DOC. NO. CPI: C1998-080568
TITLE: Medium for combined determination of exotoxin production and capsules of Bacillus anthracis - contains additionally L-alanine and iron sulphate hepta hydrate.
DERWENT CLASS: B04 D16
INVENTOR(S): EREMENKO, E I
PATENT ASSIGNEE(S): (STAV-R) STAVROPOL ANTIPLAGUE RES INST
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
RU 2092550	C1	19971010	(199823)*		9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RU 2092550	C1	RU 1994-13348	19940415

PRIORITY APPLN. INFO: RU 1994-13348 19940415
AN 1998-259797 [23] WPIDS
AB RU 2092550 C UPAB: 19980610
A medium for combined determination of exotoxin production contains (in g/l): L-alanine 0.035-0.070, L-arginine hydrochloride 0.200-0.250, L-asparaginic acid 0.250-0.370, L-valine 0.240-0.350, L-histidine hydrochloride 0.074-0.110, glycine 0.090-0.130, sodium L-glutamate 0.820-1.230, L-isoleucine 0.230-0.340, L-leucine 0.300-0.460, L-lysine 0.300-0.460, L-methionine 0.100-0.150, L-proline 0.060-0.090, L-serine 0.310-0.470, L-threonine 0.160-0.240, L-tyrosine 0.200-0.300, L-tryptophan 0.047-0.070, L-phenylalanine 0.170-0.250, L-cystine 0.034-0.050, adenine 0.003-0.004, uracyl 0.002-0.003, thiamine hydrochloride 0.001-0.0015, calcium chloride 0.008-0.012, magnesium sulphate heptahydrate 0.026-0.032, manganese sulphate pentahydrate 0.002-0.003, iron sulphate heptahydrate 0.002-0.003, potassium hydrophosphate tetrahydrate 3.920-4.00, sodium hydrocarbonate 8.00-10.00, alpha +-glucose 2.3-2.7, agarose 10-15, anthracis globulin as antitoxin **antibody** (I) 0.075-0.1 l and distilled water up to 1 l.
USE - In medicinal microbiology, as a method of laboratory **determination** of virulence of **B. anthracis** strains.
ADVANTAGE - The method has increased sensitivity of determination of production of exotoxin and capsule of B. anthracis. Dwg.0/0

L4 ANSWER 8 OF 28 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 97118415 MEDLINE
DOCUMENT NUMBER: 97118415 PubMed ID: 8959266
TITLE: Assay development for a portable fiberoptic biosensor.
AUTHOR: Anderson G P; Breslin K A; Ligler F S
CORPORATE SOURCE: Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington, DC 20375-5348, USA.
SOURCE: ASAIO JOURNAL, (1996 Nov-Dec) 42 (6) 942-6.
Journal code: BBH; 9204109. ISSN: 1058-2916.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970414
Last Updated on STN: 19990129
Entered Medline: 19970328
AB The fiberoptic biosensor with tapered optical probes has been developed to perform rapid and sensitive fluoroimmunoassays. A number of assays for biologic analytes were developed using a laboratory breadboard device that employed a large, 514 nm argon ion laser. These assays, with limits of detection of 5-50 ng/ml for protein antigens, showed promise for clinical use because of their demonstrated lack of matrix effects from plasma, serum, or blood. However, such a large device was impractical for on-site diagnostics, so a new, portable, multichannel biosensor was developed. To test this new biosensor, which uses 635 nm laser

diodes, the assays were converted to use the cyanine dye, Cy5. The detection **antibodies** were labeled with Cy5 and assays performed to detect the F1 antigen of Yersinia pestis and the protective antigen of **Bacillus anthracis**. The limit of **detection** was found to improve by a factor of 10 for each assay. The portable biosensor was then evaluated in a blind test containing F1 antigen spiked into 30 of 173 serum samples. One hundred percent detection was achieved for samples with 100 ng/ml or more F1 antigen, with a specificity of 88%.

L4 ANSWER 9 OF 28 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 95336656 MEDLINE
DOCUMENT NUMBER: 95336656 PubMed ID: 7612203
TITLE: Sensitive detection of biotoxoids and bacterial spores using an immunomagnetic electrochemiluminescence sensor.
AUTHOR: Gatto-Menking D L; Yu H; Bruno J G; Goode M T; Miller M; Zulich A W
CORPORATE SOURCE: Science and Technology Corp., Edgewood, MD 21040, USA.
SOURCE: BIOSENSORS AND BIOELECTRONICS, (1995 Summer) 10 (6-7) 501-7.
Journal code: AKA; 9001289. ISSN: 0956-5663.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950905
Last Updated on STN: 19990129
Entered Medline: 19950824

AB Extremely sensitive detection of various biotoxoids and bacterial spores using the commercial ORIGEN analyzer was achieved by capture on **antibody**-conjugated micron sized magnetic beads (MBs) followed by binding of ruthenium (II) trisbipyridal chelate (Ru(bpy)2+3-labelled reporter **antibodies**. Immunomagnetically captured target materials were collected on a magnet. Electrochemiluminescence (ECL) was evoked from the Ru(bpy)3(2+)-tagged reporter **antibodies** by application of an electrical potential. Femtogram sensitivity levels were obtained for all biotoxoids tested including botulinus A, cholera beta subunit, ricin and staphylococcal enterotoxoid B by this immunomagnetic (IM)-ECL approach. An IM-ECL assay for **Bacillus anthracis** spores yielded a **detection** limit of at least 100 spores. The ECL signal was a function of analyte quantity over several orders of magnitude, but the immunological 'hook' effect at high antigen loads made quantitation impossible over a broader range. All assays were performed with a maximum combined incubation and assay time of approximately 40 min. This work demonstrates the extreme sensitivity of the IM-ECL approach for soluble and particulate antigens.

L4 ANSWER 10 OF 28 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 96050783 MEDLINE
DOCUMENT NUMBER: 96050783 PubMed ID: 7496927
TITLE: Enzyme-linked immunosorbent assay using a recombinant baculovirus-expressed Bacillus anthracis protective antigen (PA): measurement of human anti-PA

antibodies.
AUTHOR: Iacono-Connors L C; Novak J; Rossi C; Mangiafico J; Ksiazek T
CORPORATE SOURCE: Virology Division, U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Maryland 21702-5011, USA.
SOURCE: CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, (1994 Jan) 1 (1) 78-82.
Journal code: CB7; 9421292. ISSN: 1071-412X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 19960217
Last Updated on STN: 19960217
Entered Medline: 19960116

AB We developed an antigen capture enzyme-linked immunosorbent assay (ELISA) which does not require purified protective antigen (PA) for **detection** of human **antibodies** to **Bacillus anthracis** PA. Lysates of Spodoptera frugiperda (Sf-9) cells infected with recombinant baculovirus containing the PA gene were used as the source of PA to develop the ELISA. Recombinant PA from crude Sf-9 cell lysates or PA purified from B. anthracis Sterne strain was captured by an anti-PA monoclonal **antibody** coated onto microtiter plates. We demonstrated that human serum **antibody** titers to PA were identical in the ELISA whether we used crude Sf-9 cell lysates containing recombinant baculovirus-expressed PA or purified Sterne PA. Finally, false-positive results observed in a direct ELISA were eliminated with this antigen capture ELISA. Thus, the antigen capture ELISA with crude preparations of baculovirus-expressed PA is reliable, safe, and inexpensive for determining anti-PA **antibody** levels in human sera.

L4 ANSWER 11 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:377847 BIOSIS
DOCUMENT NUMBER: PREV199345049272
TITLE: Rapid **detection** of **Bacillus anthracis** protective antigen (PA) in clinical specimens using a rapid membrane flow through assay.
AUTHOR(S): Burans, J. P. (1); O'Brien, T. (1); Hager, J.; Goodman, A.; Hayes, C. (1); Ezzel, J.
CORPORATE SOURCE: (1) Naval Med. Res. Inst., Bethesda, MD USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1993) Vol. 93, No. 0, pp. 504.
Meeting Info.: 93rd General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 16-20, 1993
ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L4 ANSWER 12 OF 28 MEDLINE ~~DUPLICATE 7~~
ACCESSION NUMBER: 92275917 MEDLINE
DOCUMENT NUMBER: 92275917 PubMed ID: 1592559
TITLE: Modulation of humoral and cellular resistance in

children with laryngeal papillomatosis.
AUTHOR: Jakubikova J; Oravec C; Klacansky I
CORPORATE SOURCE: Pediatric Otolaryngologic Clinic, Faculty of Medicine, Comenius University, Bratislava Czechoslovakia.
SOURCE: INTERNATIONAL JOURNAL OF PEDIATRIC OTORHINOLARYNGOLOGY, (1992 May) 23 (3) 229-36. Journal code: GS2; 8003603. ISSN: 0165-5876.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199207
ENTRY DATE: Entered STN: 19920710
Last Updated on STN: 19920710
Entered Medline: 19920702

AB As accessory cells in immunity response immunoglobulin and lymphocytes participate in antitumor immunity. Quantitative changes in concentrations and numbers were studied once before therapy, without examining the functional state. In order to gain more information on the humoral response during and after treatment, and in cases of recurrence, bactericidal **antibodies** against **B. anthracis** were **determined** by means of 51Cr-labeled microbes. The results of the present study show that IgG levels were normal and IgA and IgM normal or increased. In only 2 children (0.8%) the levels of serum IgM were lowered. Although a high percentage of increased trend values of bactericidity in cured children was found (75%), the percentage in children with recurrences reaching 50%, the differences are considered statistically insignificant. Following T lymphocyte, figures a significant decrease in juvenile laryngeal papillomatosis (JLP) patients were found.

L4 ANSWER 13 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 8
ACCESSION NUMBER: 1991:333138 BIOSIS
DOCUMENT NUMBER: BR41:29688
TITLE: THE MONITORING AND **DETECTION** OF **BACILLUS-ANTHRACIS** IN THE ENVIRONMENT.
AUTHOR(S): TITBALL R W; TURNBULL P C B; HUTSON R A
CORPORATE SOURCE: CHEM. DEFENCE ESTABLISHMENT, PORTON DOWN, SALISBURY, WILTS. SP4 0JQ, UK.
SOURCE: AUSTIN, B. (ED.). SOCIETY FOR APPLIED BACTERIOLOGY SYMPOSIUM SERIES, NO. 20. PATHOGENS IN THE ENVIRONMENT; 1990 SUMMER SYMPOSIUM, LEEDS, ENGLAND, UK. VIIS+149S. BLACKWELL SCIENTIFIC PUBLICATIONS: OXFORD, ENGLAND, UK; BOSTON, MASSACHUSETTS, USA. ILLUS. MAPS. PAPER, (1991) 0 (0), 9S-18S. CODEN: SAPBB7. ISSN: 0300-9610.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L4 ANSWER 14 OF 28 MEDLINE ~~DUPLICATE 9~~
ACCESSION NUMBER: 90320081 MEDLINE
DOCUMENT NUMBER: 90320081 PubMed ID: 2115214
TITLE: Immunosuppression in caprine trypanosomiasis: effects

of acute Trypanosoma congolense infection on **antibody** response to anthrax spore vaccine.
AUTHOR: Mwangi D M; Munyua W K; Nyaga P N
CORPORATE SOURCE: Department of Veterinary Pathology and Microbiology, Faculty of Veterinary Medicine, University of Nairobi, Kenya.
SOURCE: TROPICAL ANIMAL HEALTH AND PRODUCTION, (1990 May) 22 (2) 95-100.
Journal code: WG2; 1277355. ISSN: 0049-4747.
PUB. COUNTRY: SCOTLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199008
ENTRY DATE: Entered STN: 19900921
Last Updated on STN: 19900921
Entered Medline: 19900821

AB Trypanosoma congolense infected goats were vaccinated with **Bacillus anthracis** spore vaccine to **determine** the effect of such infection on the humoral immune response to the vaccine. The anti-anthrax **antibody** levels were severely depressed in infected goats. When trypanocidal therapy was administered to T. congolense infected goats 14 days after infection they developed **antibody** levels against Bacillus anthracis similar to uninfected controls.

L4 ANSWER 15 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1991:129377 BIOSIS
DOCUMENT NUMBER: BR40:61062
TITLE: THE MONITORING AND **DETECTION** OF **BACILLUS-ANTHRACIS** IN THE ENVIRONMENT.
AUTHOR(S): TITBALL R W; TURNBULL P C B; HUTSON R A
CORPORATE SOURCE: CHEM. DEF. ESTABLISHMENT, PORTON DOWN, SALISBURY, WILTSHIRE SP4 0JQ, UK.
SOURCE: MEETING OF THE SOCIETY FOR APPLIED BACTERIOLOGY, LEEDS, ENGLAND, UK, JULY 16-20, 1990. J APPL BACTERIOL, (1990) 69 (6), I-II.
CODEN: JABAA4. ISSN: 0021-8847.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L4 ANSWER 16 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1990:218365 BIOSIS
DOCUMENT NUMBER: BA89:115655
TITLE: **DETECTION** OF THE PROTECTIVE ANTIGEN OF **BACILLUS-ANTHRACIS** THROUGH THE E.I.A. BASED ON MONOCLONAL **ANTIBODIES**.
AUTHOR(S): KRAATZ-WADSACK G; BOEHM R; KLEINE-ALBERS C
CORPORATE SOURCE: ECOLE SUPERIEURE, SERVICE SANTE, FORCES ARMEES FEDERALES, W. GER.
SOURCE: REV INT SERV SANTE FORCES ARMEES, (1989) 62 (10-12), 314-315.
CODEN: RSSAEZ.
FILE SEGMENT: BA; OLD
LANGUAGE: French
AB The protective antigen is clearly detected in the emerging ones of

24 stocks of bacillus Anthracis through the immuno-enzymatic test. Three stocks of bacillus Anthracis were negative. The emerging ones of 50 stocks of heterogenic bacilli gave clearly negative answer to the test, their extinction value being below 0.100. Therefore, the system proves its usefulness and can be successfully repeated.

L4 ANSWER 17 OF 28 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 89348610 MEDLINE
DOCUMENT NUMBER: 89348610 PubMed ID: 2503957
TITLE: [The **detection** of **Bacillus anthracis** protective antigens by enzyme immunoassay (EIA) using polyclonal and monoclonal **antibodies**].
Nachweis von Bacillus anthracis-Schutzantigen mittels Enzym-Immunoassay (EIA) unter Verwendung von polyklonalen sowie monoklonalen Antikorpern.
AUTHOR: Kleine-Albers C; Bohm R
SOURCE: ZENTRALBLATT FUR VETERINARMEDIZIN. REIHE B, (1989 May) 36 (3) 226-30.
Journal code: Y72; 0331325. ISSN: 0514-7166.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198909
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19900309
Entered Medline: 19890908

AB An Enzyme-Immunoassay (EIA) for the **detection** of **Bacillus anthracis**-protective antigen (PA) within one hour was developed. If the rabbit antiserum was used, 15 ng PA/ml could be detected and with the monoclonal **antibody**, the detection limit was 60 ng PA/ml. With respect to the higher specificity and with regard to the aspects of animalcare, monoclonal **antibodies** should be used in the test instead of the polyclonal antiserum.

L4 ANSWER 18 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:38735 BIOSIS
DOCUMENT NUMBER: BR36:16052
TITLE: ADVANCES IN VETERINARY MEDICINE VOL. 38. RAPID AND AUTOMATABLE METHODS OF DIAGNOSIS FOR BACILLUS-ANTHRACIS AS TEST ORGANISM IN STUDIES ON ENVIRONMENTAL HYGIENE.
AUTHOR(S): BOEHM R
CORPORATE SOURCE: INST. TIERMEDIZIN TIERHYGIENE TIERKLINIK, UNIV. HOHENHEIM, STUTTGART.
SOURCE: BOEHM, R. FORTSCHRITTE DER VETERINAERMEDIZIN, BAND 38. SCHNELLE UND AUTOMATISIERBARE DIAGNOSEMETHODEN FUER BACILLUS ANTHRACIS ALS TESTKEIM BEI UNTERSUCHUNGEN ZUR UMWELTHYGIENE; (ADVANCES IN VETERINARY MEDICINE, VOL. 38. RAPID AND AUTOMATISABLE METHODS OF DIAGNOSIS FOR BACILLUS ANTHRACIS AS TEST ORGANISM IN STUDIES ON ENVIRONMENTAL HYGIENE). 192P. PAUL PAREY SCIENTIFIC PUBLISHERS: BERLIN, WEST GERMANY. ILLUS. PAPER, (1988) 0 (0), 192P.
CODEN: AVYMAX. ISSN: 0301-2794. ISBN: 3-489-50416-X.
DOCUMENT TYPE: Book

FILE SEGMENT: BR; OLD
LANGUAGE: German
AB This volume analyzes the suitability of 3 techniques for **detecting Bacillus anthracis** in the decontamination of communal or animal wastes. The underlying biological and physical principles and the advantages and disadvantages of fluorescent **antibody** staining, direct fluorochromation, and pyrolysis-mass spectrometry are detailed. Of these, only the application of fluorescent **antibodies** appears to be simple, reliable, and rapid. Pyrolysis-mass spectrometry could be used for diagnosis of B. anthracis, but further work is needed so that it can differentiate this from B. cereus and B. megaterium. Illustrations and tables supplement the text, and an index is provided.

L4 ANSWER 19 OF 28 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 890018627 JICST-EPlus
TITLE: Test of anthrax immune serum power with an inbred mouse line and related experiments.
AUTHOR: KUBOMICHI MORIO
SHIBAYA MASAHARU; WATANABE TADAO
CORPORATE SOURCE: National Inst. of Animal Health
Tokyo Univ. of Agriculture
SOURCE: Chikusan no Kenkyu (Animal Husbandry), (1988) vol. 42, no. 11, pp. 1330-1332. Journal Code: G0644A (Fig. 1, Tbl. 5, Ref. 10)
CODEN: CKNKAJ; ISSN: 0009-3874
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New
AB Experiments using a C3H/He mouse line resistant to **Bacillus anthracis** were conducted to **determine** whether passive immunization is possible with anthrax immune serum and it was found to be so. Further, a protection test with this passive immunization indicated that a test for the power of anthrax immune serum products could possibly be conducted on the mouse line mentioned above. Full development of the protective capacity against the 34F2 strain of B. anthracis in the mice required 120 hours, and certain immunosuppressants were found to stimulate sensitivity to the bacillus.

L4 ANSWER 20 OF 28 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 88129331 MEDLINE
DOCUMENT NUMBER: 88129331 PubMed ID: 2448978
TITLE: [Use of immunological adsorption in heterogeneous immunoenzyme analysis in determining **antibodies** to the protective **determinants** of **Bacillus anthracis**].
Primenenie immunologicheskoi adsorbtsii v geterogennom immunofermentnom analize pri opredelenii antitel k protektivnym **determinantam Bacillus anthracis**.
AUTHOR: Abalakin V A
SOURCE: ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, (1987 Nov) (11) 90-4.
Journal code: Y9O; 0415217. ISSN: 0372-9311.

PUB. COUNTRY: USSR
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Russian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198803
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19880310

AB In a heterogeneous enzyme immunoassay system involving the use of polystyrene assay plates, the method of immunological adsorption has been used for studying the spectrum of specific **antibodies** to individual chromatographically pure fractions of B. anthracis toxin. The relationship between the characteristics of acquired stability and the level of serum **antibodies** to individual biologically active and biologically inactive toxin antigens in guinea pigs, immunized with live vaccines in a single injection, has been studied. As revealed in this study, the level of serum **antibodies** to chromatographically pure toxin fractions does not reflect acquired immunity to anthrax.

L4 ANSWER 21 OF 28 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 88:101276 SCISEARCH
THE GENUINE ARTICLE: M1033
TITLE: USE OF IMMUNOLOGICAL ADSORPTION IN A HETEROGENEOUS ENZYME-IMMUNOASSAY (EIA) IN THE **DETERMINATION** OF **ANTIBODIES** TO **BACILLUS-ANTHRACIS** PROTECTIVE **DETERMINANTS**
AUTHOR: ABALAKIN V A (Reprint)
CORPORATE SOURCE: MINIST PUBL HLTH USSR, CENT RES INST EPIDEMIOL, MOSCOW, USSR (Reprint)
COUNTRY OF AUTHOR: USSR
SOURCE: ZHURNAL MIKROBIOLOGII EPIDEMIOLOGII I IMMUNOBIOLOGII , (1987) No. 11, pp. 90-94.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: Russian
REFERENCE COUNT: 5

L4 ANSWER 22 OF 28 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 86061007 MEDLINE
DOCUMENT NUMBER: 86061007 PubMed ID: 3934286
TITLE: Serum stimulation and repression of flow immunofluorescence staining of bacteria.
AUTHOR: Phillips A P; Martin K L
SOURCE: JOURNAL OF IMMUNOLOGICAL METHODS, (1985 Nov 28) 84 (1-2) 303-11.
Journal code: IFE; 1305440. ISSN: 0022-1759.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198601
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19980206
Entered Medline: 19860108

AB A flow cytometer was used to measure the fluorescence intensity of Bacillus anthracis spores, B. subtilis spores and Escherichia coli

stained in suspension with specific rabbit fluorescein-conjugated **antibody**. The effect of normal sera and a number of other additives on the binding of conjugate to the surface of the homologous bacteria was assessed by measuring the median fluorescence intensity of the bacterial population in the reaction mixture. Non-ionic detergent depressed binding of one conjugate (anti-E. coli) by up to 22%. Bovine serum albumin, gelatin, foetal calf serum and normal rabbit serum did not affect the median fluorescence value for these 3 bacterial species by more than 14%. Normal serum from 5 goats reduced the specific staining of B. anthracis by up to two-thirds. Anti-**B. anthracis antibodies** were **detected** in goat serum by indirect immunofluorescence microscopy, and it is inferred that these goat **antibodies** were in competition with fluorescein conjugate for the bacterial antigens. Normal goat and sheep serum stimulated the specific staining of B. subtilis and E. coli measured by the cytometer; in the case of goat serum previous heating of the serum to 56 degrees C resulted in repression of staining of E. coli. Since anti-E. coli **antibody** was detected in this normal sera by indirect immunofluorescence assays, it is proposed that repression was caused by anti-bacterial **antibodies** and stimulation by a separate factor, heat-labile in the case of goat serum. The stimulatory factor was also apparently inactivated by increasing the NaCl concentration, suggesting that stimulation depends heavily on charge interactions. Preliminary evidence is presented that the stimulatory factor may be anti-**antibody**, possibly of the IgA or IgG class.

L4 ANSWER 23 OF 28 MEDLINE DUPLICATE 13
ACCESSION NUMBER: 85153613 MEDLINE
DOCUMENT NUMBER: 85153613 PubMed ID: 3884295
TITLE: Dual-parameter scatter-flow immunofluorescence analysis of Bacillus spores.
AUTHOR: Phillips A P; Martin K L
SOURCE: CYTOMETRY, (1985 Mar) 6 (2) 124-9.
Journal code: D92; 8102328. ISSN: 0196-4763.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198505
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850509

AB Using a commercial flow cytometer (Cyto-fluorograf), narrow-forward-angle (NFA) light-scatter signals were **detected** for spore preparations of **Bacillus anthracis** Vollum, B. anthracis Sterne, B. cereus NCTC 8035, and B. subtilis var niger. In the flow immunofluorescence (FIF) analysis of spores stained with fluorescein-conjugated hyperimmune **antibody** to B. anthracis Vollum spores, fluorescence histograms could be acquired by selecting on NFA scatter. Fluorescence data selected on ninety degree scatter were rather noisier. Fluorescence analysis by dual parameter NFA scatter-FIF techniques was shown to have several advantages over the subtraction FIF method reported earlier. The implication from FIF analysis of spore suspensions and corresponding cell-free supernatants that the peak in the fluorescence histogram was caused by signals from

fluorescing spores, was confirmed by use of the cell sorter and subsequent microscopy of the sorted samples. Although a proportion of spore aggregates was present in samples sorted from the right-hand tail of the fluorescence histogram, it was demonstrated that the majority of the observed distribution of fluorescence was not due to the formation of aggregates but was rather an expression of variation in the degree of staining of individual spores.

L4 ANSWER 24 OF 28 MEDLINE
ACCESSION NUMBER: 83073332 MEDLINE
DOCUMENT NUMBER: 83073332 PubMed ID: 6816140
TITLE: [New immunofluorescent method for the rapid determination of microbial antibiotic sensitivity]. Novaia immunofliuorestsentnaia metodika ekspressnogo opredeleniia antibiotikochuvstvitel'nosti mikrobov.
AUTHOR: D'iakov S I; Lebedeva I K; Lisin V V; Grishin G I
SOURCE: ANTIBIOTIKI, (1982 Oct) 27 (10) 761-6.
Journal code: 6GC; 0375020. ISSN: 0003-5637.
PUB. COUNTRY: USSR
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Russian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198301
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19830119

AB A new procedure for rapid determination of the levels of antibiotic sensitivity in pathogenic microorganisms with the use of fluorescent **antibodies** is described. The procedure was developed with the use of a model of the vaccinal strains of **Bacillus anthracis**. It is based on **determination** of the microbial antibiotic resistance with the method of serial dilutions on solid media. Still, the medium with an antibiotic is inoculated instead of the pathogen with the native material subject to the analysis. The antibiotic effect on the microorganism is estimated with the method of fluorescent **antibodies**. The replica preparations obtained as a result of the pathogen growth in a mixed culture on nutrient media containing definite concentrations of the antibiotic are examined with the method of luminescence microscopy. The modification of the immunofluorescent procedure for rapid determination of the microbial sensitivity to antibiotics does not require obligatory isolation of the pathogen as a pure culture. This makes the procedure more economic with respect to the time necessary for the analysis. The following conditions for performing rapid analysis with respect to Bacillus anthracis are required: the minimal concentration of the pathogen in the specimen (2.10(5) spores/ml), preliminary thermal treatment of the specimen for destroying the spore microflora, additional cultivation for 6-8 hours at 37 degrees C. The presence of the accompanying sporulating microflora, i.e. common microorganisms present in the atmosphere, soil and open water bodies does not prevent the performance of the analysis.

L4 ANSWER 25 OF 28 MEDLINE
ACCESSION NUMBER: 74280687 MEDLINE
DOCUMENT NUMBER: 74280687 PubMed ID: 4210755
TITLE: [A fluorescence serological rapid test for the **determination** of spores from **Bacillus**

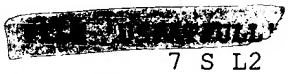
anthracis using the micro culture method on nucleopore filters].
Ein fluoreszenzserologischer Schnellnachweis von Milzbrandsporen durch die Anwendung der Mikrokulturmethode auf Nuclepore-Filtern.
AUTHOR: Bohm R; Strauch D
SOURCE: ZENTRALBLATT FUR VETERINARMEDIZIN. REIHE B, (1974 May) 21 (5) 329-35.
Journal code: Y72; 0331325. ISSN: 0514-7166.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197410
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19741011

L4 ANSWER 26 OF 28 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 74074844 EMBASE
DOCUMENT NUMBER: 1974074844
TITLE: A new method for latex agglutination in anthrax (Bulgarian).
AUTHOR: Kujumdziev D.; Avramova S.; Siromaskova M.
CORPORATE SOURCE: Otd. Mikrobiol., Med. Akad., Sofia, Bulgaria
SOURCE: EPIDEM.MIKROBIOL.INFEK.BOLESTI, (1973) 10/2 (168-174).
CODEN: EMIBA3
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
LANGUAGE: Bulgarian
AB A latex test was developed for the serologic diagnosis of anthrax in man. For that purpose standard latex was obtained from polymethylmethacrylate and specific polysaccharide antigen from **B. anthracis**. Attention is given to the **determination** of latex concentration and the type of buffer.

L4 ANSWER 27 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1970:60407 BIOSIS
DOCUMENT NUMBER: BR06:60407
TITLE: PRODUCTION OF **ANTIBODY** AGAINST CONJUGATED DIPICOLINIC-ACID 2 6 PYRIDINE DI CARBOXYLIC-ACID.
AUTHOR(S): DISQUE D T; VINCENT W F
SOURCE: Appl. Microbiol., (1969) 17 (5), 771-772.
CODEN: APMBAY. ISSN: 0003-6919.
DOCUMENT TYPE: Short Communication
FILE SEGMENT: BR; OLD
LANGUAGE: Unavailable

L4 ANSWER 28 OF 28 MEDLINE
ACCESSION NUMBER: 58113482 MEDLINE
DOCUMENT NUMBER: 58113482
TITLE: [Fluorescein-labeled **antibodies** in **detection** of **Bacillus anthracis**. I].
Mechennye fluorestseinom antitela dlia vyiavleniia bakterii sibirskoi iazvy. I.
AUTHOR: LEVINA E N

SOURCE: Zh. mikrob., Moskva, (1958 Jan) 29 (1) 9-15.
DOCUMENT TYPE: Journal
LANGUAGE: Russian
FILE SEGMENT: OLDMEDLINE
OTHER SOURCE: CLML5834-63135-70-230
ENTRY MONTH: 195812
ENTRY DATE: Entered STN: 20000825
Last Updated on STN: 20000825


ENTERED AT 10:11:37 ON 26 MAR 2002

L5 7 S L2

L5 ANSWER 1 OF 7 USPATFULL

ACCESSION NUMBER: 2002:48266 USPATFULL
TITLE: Single target counting assays using semiconductor nanocrystals
INVENTOR(S): Empedocles, Stephen Alexander, Mountain View, CA, UNITED STATES
Watson, Andrew R., Belmont, CA, UNITED STATES
Phillips, Vince, Sunnyvale, CA, UNITED STATES
Wong, Edith, Danville, CA, UNITED STATES
PATENT ASSIGNEE(S): Quantum Dot Corporation, Hayward, CA, UNITED STATES, 94545 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002028457	A1	20020307
APPLICATION INFO.:	US 2001-882193	A1	20010613 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-784866, filed on 15 Feb 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-182844P	20000216 (60)
	US 2000-211054P	20000613 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Page(s)
LINE COUNT: 2844

AB The present invention provides assays that allow for the detection of a single copy of a target of interest. The target species is either directly or indirectly labeled with a semiconductor nanocrytal, "quantum dot." The bright and tunable fluorescence of the quantum dot is readily detected using methods described herein. Also provided are assays that are based on the colocalization of two or more differently colored quantum dots on a single target species, which provides superbly sensitive assays in which the decrease in assay sensitivity caused by non-specific binding of assay mixture components to the assay substrate is minimized. The assays are of use to detect target species including, but are not limited to, nucleic acids, polypeptides, small organic bioactive agents (e.g., drugs, agents of war, herbicides, pesticides, etc.) and organisms.

INCL INCLM: 435/006.000
INCLS: 435/008.000
NCL NCLM: 435/006.000
NCLS: 435/008.000

L5 ANSWER 2 OF 7 USPATFULL
ACCESSION NUMBER: 2001:226422 USPATFULL
TITLE: Method for **screening** inhibitors of the toxicity of **Bacillus anthracis**
INVENTOR(S): Cirino, Nick M., Los Alamos, NM, United States
Jackson, Paul J., Los Alamos, NM, United States
Lehnert, Bruce E., Los Alamos, NM, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Los Alamos, NM, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6329156	B1	20011211
APPLICATION INFO.:	US 1999-273839		19990322 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Devi, S.
LEGAL REPRESENTATIVE: Freund, Samuel M.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 690
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The protective antigen (PA) of Bacillus anthracis is integral to the mechanism of anthrax poisoning. The cloning, expression and purification of a 32 kDa B. anthracis PA fragment (PA32) is described. This fragment has also been expressed as a fusion construct to stabilized green fluorescent protein (EGFP-PA32). Both proteins were capable of binding to specific cell surface receptors as determined by fluorescent microscopy and a flow cytometric assay. To confirm binding specificity in the flow cytometric assay, non-fluorescent PA83 or PA32 was used to competitively inhibit fluorescent EGFP-PA32 binding to cell receptors. This assay can be employed as a rapid screen for compounds which disrupts binding of PA to cells. Additionally, the high intracellular expression levels and ease of purification make this recombinant protein an attractive vaccine candidate or therapeutic treatment for anthrax poisoning.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 435/007.210
INCLS: 435/007.320; 435/006.000; 435/004.000; 435/007.200; 436/544.000; 436/546.000; 436/172.000
NCL NCLM: 435/007.210
NCLS: 435/004.000; 435/006.000; 435/007.200; 435/007.320; 436/172.000; 436/544.000; 436/546.000

~~L5 ANSWER 3 OF 7 USPATFULL~~
ACCESSION NUMBER: 2001:185038 USPATFULL
TITLE: Nucleic acid-coupled colorimetric analyte detectors
INVENTOR(S): Charych, Deborah H., Albany, CA, United States

Jonas, Ulrich, Mainz, Germany, Federal Republic of
PATENT ASSIGNEE(S): Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6306598	B1	20011023
APPLICATION INFO.:	US 1999-337973		19990621 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-461509, filed on 14 Dec 1999 Division of Ser. No. US 1996-592724, filed on 26 Jan 1996, now patented, Pat. No. US 6001556 Continuation-in-part of Ser. No. US 1993-159927, filed on 30 Nov 1993 Continuation-in-part of Ser. No. US 1992-976697, filed on 13 Nov 1992 Continuation-in-part of Ser. No. US 2000-500295, filed on 8 Feb 2000 Division of Ser. No. US 1997-920501, filed on 29 Aug 1997, now patented, Pat. No. US 6022748 Continuation-in-part of Ser. No. US 1998-103344, filed on 23 Jun 1998 Continuation-in-part of Ser. No. US 1996-609312, filed on 1 Mar 1996 Continuation-in-part of Ser. No. US 1995-389475, filed on 13 Feb 1995, now abandoned Continuation-in-part of Ser. No. US 1994-289384, filed on 11 Aug 1994, now abandoned Continuation-in-part of Ser. No. US 1996-328237, filed on 24 Oct 1996, now abandoned Continuation-in-part of Ser. No. US 1997-944323, filed on 8 Oct 1997 Division of Ser. No. US 1995-389475, filed on 13 Feb 1995, now abandoned Continuation-in-part of Ser. No. US 1994-289384, filed on 11 Aug 1994, now abandoned Continuation-in-part of Ser. No. US 1998-23898, filed on 13 Feb 1998 Continuation-in-part of Ser. No. US 1998-33557, filed on 2 Mar 1998

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-90266P	19980622 (60)
	US 1997-50496P	19970623 (60)
	US 1997-38383P	19970214 (60)
	US 1997-39749P	19970303 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Riley, Jezia
LEGAL REPRESENTATIVE: Medlen & Carroll, LLP
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 60 Drawing Figure(s); 53 Drawing Page(s)
LINE COUNT: 4877
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods and compositions for the direct detection of analytes and membrane conformational changes through the detection of color changes in biopolymeric materials. In particular, the present invention provide for the direct colorimetric detection of analytes using nucleic acid ligands at surfaces of polydiacetylene liposomes and related molecular layer

systems.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 435/006.000
INCLS: 435/007.100; 435/007.200; 536/022.100; 536/023.100; 536/024.300; 536/025.330; 536/024.330; 436/518.000; 436/528.000; 422/055.000; 422/067.000; 422/082.050; 422/082.090
NCL NCLM: 435/006.000
NCLS: 422/055.000; 422/067.000; 422/082.050; 422/082.090; 435/007.100; 435/007.200; 436/518.000; 436/528.000; 536/022.100; 536/023.100; 536/024.300; 536/024.330; 536/025.330

L5 ANSWER 4 OF 7 USPATFULL

ACCESSION NUMBER:	2001:178820 USPATFULL
TITLE:	Organic semiconductor recognition complex and system
INVENTOR(S):	Kiel, Johnathan L., Universal City, TX, United States Bruno, John G., San Antonio, TX, United States Parker, Jill E., Floresville, TX, United States Alls, John L., San Antonio, TX, United States Batishko, Charles R., Richland, WA, United States Holwitt, Eric A., San Antonio, TX, United States
PATENT ASSIGNEE(S):	Conceptual Mind Works, Inc., San Antonio, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6303316	B1	20011016	
APPLICATION INFO.:	US 2000-608706		20000630	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-142301P	19990702	(60)
	US 2000-199620P	20000425	(60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Horlick, Kenneth R.
LEGAL REPRESENTATIVE:	Blakely, Sokoloff, Taylor & Zafman
NUMBER OF CLAIMS:	62
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	31 Drawing Figure(s); 15 Drawing Page(s)
LINE COUNT:	3322

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In a recognition complex system, nucleic acid ligands comprising random DNA sequences are operatively coupled to an organic semiconductor and distributed so as to form an array of recognition complexes. When an unknown chemical or biological analyte is applied to the array, the electrical and/or photochemical properties of one or more of the recognition complexes are altered upon binding of the nucleic acid ligand to the analyte. The degree to which the electrical and/or photochemical properties change is a function of the affinity of the nucleic acid ligand sequence for the analyte. The electrical and photochemical changes associated with the array, as a whole, can be used as a unique signature to identify the analyte. In

certain embodiments, an iterative process of selection and amplification of nucleic acid ligands that bind to the analyte can be used to generate a new array with greater affinity and specificity for a target analyte, or to produce one or more nucleic acid ligands with high binding affinity for an analyte. The present invention also provides methods for preparing nucleic acid ligands that bind with high affinity to an analyte and using such nucleic acid ligands to neutralize the analyte.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 435/006.000
INCLS: 435/007.100; 435/091.200; 436/094.000; 536/023.100
NCL NCLM: 435/006.000
NCLS: 435/007.100; 435/091.200; 436/094.000; 536/023.100

L5 ANSWER 5 OF 7 USPATFULL
ACCESSION NUMBER: 2001:121074 USPATFULL
TITLE: Vaccine production of the Bacillus anthracis protective antigen
INVENTOR(S): Baillie, Leslie W J, Salisbury, United Kingdom
PATENT ASSIGNEE(S): The Secretary of State for Defence, Farnborough, United Kingdom (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6267966	B1	20010731	
	WO 9808952		19980305	
APPLICATION INFO.:	US 1999-242846		19990225	(9)
	WO 1997-GB2288		19970826	
			19990225	PCT 371 date
			19990225	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1996-18107	19960830

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Stucker, Jeffrey
ASSISTANT EXAMINER: Winkler, Ulrike
LEGAL REPRESENTATIVE: Nixon & Vanderhye P.C.
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods of preparing recombinant Bacillus anthracis protective antigen or a variant or fragment thereof for use in vaccines is disclosed. The protein is expressed in a recombinant microorganism which comprises a sequence which encodes PA or said variant or fragment thereof wherein either (i) a gene of the microorganism which encodes a catabolic repressor protein and/or AbrB is inactivated, and/or (ii) wherein a region of the PA sequence which can act as a catabolic repressor binding site and/or an AbrB binding site is inactivated. Useful quantities of protein are obtainable from these organisms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 424/200.100

INCLS: 424/093.460; 424/093.462; 424/184.100; 424/235.100; 424/236.100; 435/069.300; 435/252.300; 435/252.310; 435/320.100; 435/480.000; 435/485.000; 530/825.000; 536/023.700
NCL NCLM: 424/200.100
NCLS: 424/093.460; 424/093.462; 424/184.100; 424/235.100; 424/236.100; 435/069.300; 435/252.300; 435/252.310; 435/320.100; 435/480.000; 435/485.000; 530/825.000; 536/023.700

L5 ANSWER 6 OF 7 USPATFULL

ACCESSION NUMBER: 1998:147040 USPATFULL
TITLE: Recombinant Bacillus anthracis strains unable to produce the lethal factor protein or edema factor protein
INVENTOR(S): Mock, Michele, Paris, France
Cataldi, Angel, Buenos Aires, Argentina
Pezard, Corinne, Paris, France
PATENT ASSIGNEE(S): Institut Pasteur, Paris Cedex, France (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5840312		19981124
APPLICATION INFO.:	US 1994-325647		19941019 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-961914, filed on 2 Mar 1993, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	FR 1991-5417	19910502

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Caputa, Anthony C.
LEGAL REPRESENTATIVE: Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
NUMBER OF CLAIMS: 36
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A recombinant strain of B. anthracis is characterized in that it can induce the production of protective **antibodies** against virulent strains of B. anthracis in a human or animal host, and characterized also by the mutation of the pX01 plasmid of at least one given gene coding for a protein which causes a toxic effect of B. anthracis, wherein said mutation leads to the deletion of all or part of said gene which codes for the protein causing the toxic effect, and to the insertion of a DNA cassette at said gene's deletion site in pX01, whereby the strain thereby modified may be selected and a back mutation of the recombinant strain may be prevented, and wherein the gene thereby mutated is thereafter either unable to produce the protein causing the toxic effect for which it codes, or able to code for a truncated protein which has lost its toxic properties. The use of such a strain in immunogenic compositions is also described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 424/200.100

INCLS: 435/069.300; 435/320.100; 435/172.300; 435/252.310; 424/093.460; 424/235.100; 424/246.100; 536/023.700
NCL NCLM: 424/200.100
NCLS: 424/093.460; 424/235.100; 424/246.100; 435/069.300; 435/252.310; 435/320.100; 435/480.000; 435/485.000; 536/023.700

L5 ANSWER 7 OF 7 USPATFULL
ACCESSION NUMBER: 96:18974 USPATFULL
TITLE: Optical immunoassay for microbial analytes using non-specific dyes
INVENTOR(S): Ligler, Frances S., Potomac, MD, United States
Shriver-Lake, Lisa C., Monrovia, MD, United States
Wijesuriya, Dayaweera C., College Park, MD, United States
PATENT ASSIGNEE(S): The United States of America as represented by the Secretary of the Navy, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5496700		19960305	
APPLICATION INFO.:	US 1993-102933		19930806	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Scheiner, Toni R.
LEGAL REPRESENTATIVE: McDonnell, Thomas E., Pathak, Ajay
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 747
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The presently disclosed invention relates to a method of rapid detection and identification of microorganisms including bacteria, viruses, rickettsiae and fungi. The method involves staining all microorganisms or fragments thereof in a sample. The stained sample is introduced onto an optical waveguide coated with a capture molecule specific for the microorganism of interest, and the bound microorganism or fragment thereof is then optically **detected**. For example, **detection** of **B. anthracis** and Salmonella was achieved in times of approximately one minute. The sensitivity of this method is on the order of about 3 cells/.mu.l.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 435/007.100
INCLS: 435/007.320; 435/007.300; 435/004.000; 435/006.000; 435/005.000; 435/007.200; 435/007.210; 436/501.000; 436/518.000
NCL NCLM: 435/007.100
NCLS: 435/004.000; 435/005.000; 435/006.000; 435/007.200; 435/007.210; 435/007.300; 435/007.320; 436/501.000; 436/518.000

(FILE 'CAPLUS' ENTERED AT 10:12:19 ON 26 MAR 2002)
L6 162 SEA FILE=CAPLUS ABB=ON PLU=ON (BACILL? OR B)(W)ANTHRACIS AND (ANTIBOD? OR MOAB OR MAB)

L7 5 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND SURFACE(1W)(PROTEIN OR POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)

L8 3 L7 NOT L2

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:885623 CAPLUS
DOCUMENT NUMBER: 136:36320
TITLE: Genetic vaccines that mimic natural viral infection
INVENTOR(S): Wang, Danher
PATENT ASSIGNEE(S): Genphar, Inc., USA
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091536	A2	20011206	WO 2001-US18238	20010604

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-585599 A 20000602

AB The author discloses the prepn. and application of recombinant replication-incompetent viruses as vaccine vectors. The recombinant virus comprises: (1) an antigen sequence heterologous to the vector derived from a pathogenic virus and (2) an immuno-stimulator sequence heterologous to the vector that enhances the immunogenicity of the heterologous antigen on infection of the host by the vector. In one example, an adenovirus vector was constructed to express a modified envelope glycoprotein precursor of Ebola virus within the E1 region and the genes for interleukin-2 and IL-4 within the E4 region.

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:504731 CAPLUS
DOCUMENT NUMBER: 127:217473
TITLE: IV. Molecular biology of S-layers
AUTHOR(S): Bahl, Hubert; Scholz, Holger; Bayan, Nicolas; Chami, Mohamed; Leblon, Gerard; Gulik-Krzywicki, Thaddee; Shechter, Emanuel; Fouet, Agnes; Mesnage, Stephane; Tosi-Couture, Evelyne; Gounon, Pierre; Mock, Michele; Conway de Macario, Everly; Macario, Alberto J. L.; Fernandez-Herrero, Luis A.; Olabarria, Garbine; Berenguer, Jose; Blaser, Martin J.; Lubitz, Werner; Kuen, Beatrix; Sara, Margit; Pouwels,

Peter H.; Kolen, Carin P. A. M.; Boot, Hein J.; Palva, Airi; Truppe, Michaela; Howorka, Stephan; Schroll, Gerhard; Lechleitner, Sonja; Resch, Stephanie
CORPORATE SOURCE: Fachbereich Biologie, Mikrobiologie, Universitaet Rostock, Rostock, D-18051, Germany
SOURCE: FEMS Microbiol. Rev. (1997), 20(1-2), 47-98
CODEN: FMREE4; ISSN: 0168-6445
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 197 refs. on the information available about the mol. biol. of cryst. surface layers of different bacterial groups. PS2 is the major cell wall protein of various Corynebacterium glutamicum strains. The cspB gene encoding PS2 was cloned in .lambda. gt11 by immunol. screening and sequenced. Freeze-etching electron microscopy studies performed on the wild-type strain as well as on a disrupted strain clearly demonstrated that PS2 is responsible for the formation of a highly ordered, hexagonal array at the surface of the bacterium. Here, we also describe the compn. of the S-layer of **Bacillus anthracis**. Two abundant **surface proteins** with mol. masses of 94000, named EA1 and Sap, were possible S-layer components. Their corresponding genes have been cloned. EA1 and Sap each possess three SLH motifs. EA1 is unambiguously synthesized in vivo, and could therefore be a virulence factor. This short review also presents information on the antigenic diversity of methanogenic archaea, and on some of the genes sequenced thus far that encode S-layer proteins and ABC transporters. The mechanisms inferred from the genes' organization and the proteins' sequences that might play a role in generating cell surface diversity are briefly discussed. At least three genes control the expression of the S-layer of Thermus thermophilus HB8. Gene slrA has repressor activity on the S-layer gene promoter (PslpA). Gene slpM encodes a membrane protein that functions as a transcriptional activator in vivo. The third gene is slpA itself, whose product is the S-layer protein. On this basis, we propose the existence of overlapping transcriptional and translational mechanisms which coordinately control the expression of the S-layer from T. thermophilus HB8. Campylobacter fetus strains of type A and B possess 7-8 sapA or homologues with a high degree of homol. at the 5' and 3' ends. The rearrangement by reciprocal recombination was studied. Bacillus stearothermophilus PV72 alters its surface properties in response to environmental changes. The S-layer of the wild-type B. stearothermophilus PV72 has a hexagonal (p6) symmetry and is composed of identical protein subunits (SbsA) with a mol. mass of 130000 each. When the oxygen supply is increased during continuous cultivation, SbsA becomes rapidly and irreversibly replaced by the second, smaller (mol. mass 97000) S-layer protein, SbsB, assembling into an oblique (p2) ordered lattice type. By increasing the growth temp. from 57.degree.C to 68.degree.C for at least 10 passages another variant, the S-layer deficient strain T5, could be isolated. The DNA sequences of the S-layer genes sbsA and sbsB of Bacillus stearothermophilus PV72 have been detd. encoding a S-layer protein (mol. mass 130000) with p6 symmetry and a S-layer protein (mol. mass 96000) with p2 symmetry, resp. Both genes have been cloned and stably expressed in Escherichia coli. Recombinant S-layer fusion proteins are designed for biotechnol. applications in the areas of vaccine candidates, **antibody** detection

systems, metabolic design and mol. machines. S-layers, which are present on the bacterial surface of several Lactobacillus species, are composed of a single protein with mol. masses between 40000 and 45000. L. acidophilus and evolutionarily closely related species contain two S-layer protein genes, only one of which is expressed. The L. acidophilus S-layer protein can be efficiently produced and secreted in L. casei. The possible role of S-layer proteins and antigenic variation in adherence will be discussed.

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:545677 CAPLUS
DOCUMENT NUMBER: 123:141195
TITLE: Purification and characterization of the major **surface** array **protein** from the avirulent **Bacillus anthracis** delta sterne-1
AUTHOR(S): Farchaus, Joseph W.; Ribot, Wilson J.; Downs, Mary Beth; Ezzell, John W.
CORPORATE SOURCE: Bacteriology Div., U. S. Army Med. Res. Inst. Infect. Diseases, Frederick, MD, 21702-5011, USA
SOURCE: J. Bacteriol. (1995), 177(9), 2481-9
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Many prokaryotic organisms possess surface layer (S-layer) proteins that are components of the outermost cell envelope. With immunogold labeling, it was demonstrated that the protein extractable antigen 1 (EA1) was localized on the outer surface and specifically to cell wall fragments from **Bacillus anthracis** which retained the S layer. When grown in rich medium under aerobic conditions, the avirulent strain Delta Sterne-1 released large amts. of EA1 into the medium. This EA1 had no higher-order structure initially but formed two-dimensional crystals under defined conditions. The released EA1 was purified in aq. buffers with a three-step procedure and found to have a mass of 95 kDa when subjected to denaturing sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE). N-terminal sequence data revealed exact identity to the first eight residues of the S-layer protein from B. thuringiensis 4045. Gel permeation chromatog. of the purified EA1 under nondenaturing conditions revealed a single peak corresponding to a mass of approx. 400 kDa, sugge4sting that a tetramer or dimer of dimers was the primary species in soln. SDS-PAGE of EA1 purified in the absence of protease inhibitors revealed specific proteolytic processing to an 80-kDa form, which immunoreacted with polyclonal anti-EA1 **antibodies**. This proteolytic cleavage of EA1 to 80 kDa was duplicated with purified EA1 and the protease trypsin or pronase.

([redacted]LINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, [redacted], JAPIO' ENTERED AT 10:18:13 ON 26 MAR 2002)
L9 8 S L7
L10 6 S L9 NOT L3
L11 [redacted] (3) DUPLICATES REMOVED)

L11 ANSWER 1 OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-122028 [16] WPIDS
DOC. NO. CPI: C2002-037345
TITLE: Replication-incompetent recombinant virus useful as

vaccine for immunizing humans against pathogenic virus, bacteria and parasites, has antigens heterologous to the virus and an immuno-stimulator sequence.

DERWENT CLASS: B04 D16
INVENTOR(S): WANG, D
PATENT ASSIGNEE(S): (GENP-N) GENPHAR INC
COUNTRY COUNT: 96
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001091536	A2	20011206	(200216)*	EN	142

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001091536	A2	WO 2001-US18238	20010604

PRIORITY APPLN. INFO: US 2000-585599 20000602
AN 2002-122028 [16] WPIDS
AB WO 200191536 A UPAB: 20020308

NOVELTY - A replication-incompetent recombinant virus (RV) comprising antigen sequences heterologous to RV, each sequence encoding a bacterial, viral or parasitic antigen whose expression elicits immune response against the antigen and cells expressing the antigen in a host upon infection of host by RV, and an immuno-stimulator (IS) sequence heterologous to RV, is new.

DETAILED DESCRIPTION - A replication-incompetent recombinant virus (RV) comprising antigen sequences heterologous to RV, each sequence encoding a bacterial, viral or parasitic antigen whose expression elicits immune response against the antigen and cells expressing the antigen in a host upon infection of host by RV, and an immuno-stimulator (IS) sequence heterologous to RV, is new. The IS sequence's expression in the host enhances the immunogenicity of the antigen, and RV does not cause a malignancy naturally associated with the pathogen in the host.

ACTIVITY - Virucide; Antibacterial; Antiparasitic; Protozoacide; Anti-HIV.

MECHANISM OF ACTION - Vaccine.

The immune responses of animals to the adenoviral vaccine against HIV antigens was studied. Experimental mice were inoculated with the adenoviral vaccine, Ad.tat.env.IL2. Groups of C57BL/6 mice were injected intramuscularly with 107 plaque forming units (pfu) Ad.tat.env.IL2 on different dates. Blood was collected from four animals every two weeks following inoculation and serum was prepared. At 77 days post-inoculation, these mice were re-challenged with an additional 107 pfu of Ad.tat.env.IL2. Blood was collected from three animals every day following secondary challenge. Titers

of **antibody** elicited against HIV tat and env were determined by enzyme linked immunosorbent assay (ELISA) against Ad.tat.env.IL2-infected HeLa cell lysates. The results showed that three mice in this group had strong immune responses to the HIV antigens expressed by the adenoviral vector Ad.tat.env.IL2, with the highest titer of **antibody** against HIV antigens reached in 42 days post inoculation. The second inoculation with Ad.tat.env.IL2 boosted the immune response again and very high titers were achieved within 5 days of the second inoculation.

USE - RV is useful for enhancing the immunity of a host to one or more pathogenic bacteria such as Bacillus tuberculosis, **B. anthracis**, spirochete, Borrelia burgdorferi that causes the Lyme disease in animals, parasites such as malaria, Cryptosporidium, Eimeria, Histomonas, Leucocytozoon, Plasmodium, Toxoplasma, Trichomonas, Leishmania, Trypanosoma, Giardia, Babesia or Theileria, and pathogenic viruses such as HIV type 1 and type 2, influenza virus, respiratory syncytial virus, herpes simplex virus type 1 and type 2, human papilloma virus, Ebola virus, Marburg virus and hepatitis A, B, C, D and E virus (claimed). The host is a human.

ADVANTAGE - RV induces a strong and long-lasting immune response to various strains or types of pathogens in the host.

Dwg.0/15

L11 ANSWER 2 OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2002-055457 [07] WPIDS
DOC. NO. NON-CPI: N2002-040873
DOC. NO. CPI: C2002-015873
TITLE: Novel monoclonal **antibody**, useful for detecting **B.anthracis**, and for treating **B.anthracis** infection, is specifically reactive against **Bacillus anthracis** and is non-reactive with B.thuringinesis and B.cereus.
DERWENT CLASS: B04 C06 D16 S03
INVENTOR(S): ALDRICH, J L; MANGOLD, B L; O'BRIEN, T W
PATENT ASSIGNEE(S): (TETR-N) TETRACORE LLC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001083561	A2	20011108	(200207)*	EN	27

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001083561	A2	WO 2001-US13648	20010430

PRIORITY APPLN. INFO: US 2000-200505P 20000428

AN 2002-055457 [07] WPIDS
AB WO 200183561 A UPAB: 20020130
NOVELTY - A monoclonal **antibody** (I) which is specifically reactive against **Bacillus anthracis** (Ba), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a isolated **antibody** (Ia) or its reactive portion, directed to EA1 protein of **Bacillus anthracis** (Ba);

(2) an **antibody** (II) which is specifically reactive against B.thuringiensis (Bt) and non-reactive against B.cereus (Bc) and Ba;

(3) an **antibody** (III) specifically reactive against B.cereus (Bc) and non-reactive against Ba or Bt;

(4) a hybridoma (IV) that produces (I);

(5) an **antibody** isolated from (IV);

(6) a diagnostic kit (V) comprising an **antibody** that is specifically reactive against spores or vegetative cells of Ba, Bc, or Bt;

(7) a diagnostic kit comprising an **antibody** that is specifically reactive against spores of Ba and not Bt, and incorporating a colloidal particle based lateral flow detection system;

(8) a diagnostic kit comprising an **antibody** that is specifically reactive against spores of Bt and not Ba, and incorporating a colloidal particle based lateral flow detection system;

(9) producing (M1) species-specific monoclonal **antibody** to one species of Bacillus, comprising:

(i) immunizing a host with a preparation of one species of Bacillus;

(ii) boosting the host with another preparation of an antigenically similar, but not identical species of Bacillus;

(iii) boosting the host with the preparation of the (I) species;

(iv) fusing the **antibody**-producing cells from the host with immortalized cells; and

(v) selecting a hybridoma that produces species specific monoclonal **antibody** to the one species of Bacillus;

(10) a species-specific monoclonal **antibody** (VI) to spores of Ba made by (M1);

(11) a diagnostic kit comprising (VI);

(12) a hybridoma that expresses (VI);

(13) an isolated or recombinant antigen (VII), or its antigenically active portions comprising an EA1 protein of the surface layer of Ba;

(14) a pharmaceutical composition comprising (VII) or its active portions and a carrier;

(15) a vaccine (VIII) against Ba comprising (VII), or its active portion; and

(16) a therapeutic agent (IX) comprising **antibodies** to the EA1 protein.

ACTIVITY - Antibacterial. No biological data was provided.

MECHANISM OF ACTION - Vaccine. No biological data was provided.

USE - (VII) is useful as a target for an immunological detection system for Ba. (VIII) is useful for vaccinating against Ba. (IX) is useful for treating, preventing or controlling Ba

infection (all claimed). (I) is useful for detecting and diagnosing Ba.

ADVANTAGE - (I) is highly specific for Ba, and can distinguish Ba from closely related non-pathogenic species.

Dwg.0/2

L11 ANSWER 3 OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-418358 [44] WPIDS
DOC. NO. CPI: C2001-126594
TITLE: Novel methods and kits for detecting the presence of **Bacillus anthracis** in a test sample.
DERWENT CLASS: B04 D16
INVENTOR(S): FLORES, B M; LEE, B A; VALKIRS, G E
PATENT ASSIGNEE(S): (BIOS-N) BIOSITE DIAGNOSTICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001049823	A2	20010712	(200144)*	EN	60

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001052877 A 20010716 (200169)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001049823	A2	WO 2001-US358	20010104
AU 2001052877	A	AU 2001-52877	20010104

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001052877	A	Based on	WO 200149823

PRIORITY APPLN. INFO: US 2000-174901P 20000106
AN 2001-418358 [44] WPIDS
AB WO 200149823 A UPAB: 20010809
NOVELTY - Detecting the presence of **Bacillus anthracis** in a test sample, comprises contacting the sample with a capture reagent and detecting whether the a **surface** array **protein** is bound to the capture reagent, which is indicative of the presence of **B. anthracis** in the sample.

DETAILED DESCRIPTION - Detecting the presence or absence of **B. anthracis** in a test sample, comprises contacting a test sample with a capture reagent that can bind to a **B. anthracis surface** array **protein**, where the capture reagent forms a complex with the **surface** array **protein** if the **surface**

array **protein** is present in the test sample, and detecting whether **surface** array **protein** is bound to the capture reagent, where the presence of **surface** array **protein** is indicative of the presence of **B. anthracis**.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit for detecting the presence or absence of **B. anthracis** in a sample, comprising a solid support upon which is immobilized a capture reagent that can bind to a **surface** array **protein** of **B. anthracis**, and a detection reagent which binds to the **surface** array **protein**; and

(2) a recombinant polyclonal **antibody** preparation that specifically binds to an antigenic determinant of a **surface** array **protein** of **B. anthracis**.

USE - The method and kit are useful for detecting the presence or absence of **B. anthracis** in a test sample (claimed).

ADVANTAGE - The kits and methods are a rapid, cost-effective means for detecting **B. anthracis**. The methods are also highly specific for **B. anthracis** unlike previously available methods, they do not suffer from cross-reactivity with non-anthrax microorganisms. The methods are also easier to use because there is no need to disrupt the anthrax spores for binding reagents to bind their antigens.

Dwg.0/0

L11 ANSWER 4 OF 5 MEDLINE

ACCESSION NUMBER: 1998083055 MEDLINE
DOCUMENT NUMBER: 98083055 PubMed ID: 9422592
TITLE: The capsule and S-layer: two independent and yet compatible macromolecular structures in **Bacillus anthracis**.
AUTHOR: Mesnage S; Tosi-Couture E; Gounon P; Mock M; Fouet A
CORPORATE SOURCE: Toxines et Pathogenie Bacteriennes (CNRS URA 1858), Institut Pasteur, Paris, France.
SOURCE: JOURNAL OF BACTERIOLOGY, (1998 Jan) 180 (1) 52-8. Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199802
ENTRY DATE: Entered STN: 19980217
Last Updated on STN: 19980217
Entered Medline: 19980203

AB **Bacillus anthracis**, the etiological agent of anthrax, is a gram-positive spore-forming bacterium. Fully virulent bacilli are toxinogenic and capsulated. Two abundant **surface proteins**, including the major antigen, are components of the **B. anthracis** surface layer (S-layer). The **B. anthracis** paracrystalline S-layer has previously only been found in noncapsulated vegetative cells. Here we report that the S-layer proteins are also synthesized under conditions where the poly-gamma-D-glutamic acid capsule is present. Structural and immunological analyses show that the capsule is exterior to and completely covers the S-layer proteins.

Nevertheless, analysis of single and double S-layer protein mutants shows that the presence of these proteins is not required for normal capsulation of the bacilli. Similarly, the S-layer proteins assemble as a two-dimensional crystal, even in the presence of the capsule. Thus, both structures are compatible, and yet neither is required for the correct formation of the other.

L11 ANSWER 5 OF 5 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 95247684 MEDLINE
DOCUMENT NUMBER: 95247684 PubMed ID: 7730281
TITLE: Purification and characterization of the major **surface** array **protein** from the avirulent **Bacillus anthracis** Delta Sterne-1.
AUTHOR: Farchaus J W; Ribot W J; Downs M B; Ezzell J W
CORPORATE SOURCE: Bacteriology Division, U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Frederick, Maryland 21702-5011, USA.
SOURCE: JOURNAL OF BACTERIOLOGY, (1995 May) 177 (9) 2481-9. Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199506
ENTRY DATE: Entered STN: 19950608
Last Updated on STN: 19950608
Entered Medline: 19950601

AB Many prokaryotic organisms possess surface layer (S-layer) proteins that are components of the outermost cell envelope. With immunogold labeling, it was demonstrated that the protein extractable antigen 1 (EA1) was localized on the outer surface and specifically to cell wall fragments from **Bacillus anthracis** which retained the S layer. When grown in rich medium under aerobic conditions, the avirulent strain Delta Sterne-1 released large amounts of EA1 into the medium. This EA1 had no higher-order structure initially but formed two-dimensional crystals under defined conditions. The released EA1 was purified in aqueous buffers with a three-step procedure and found to have a mass of 95 kDa when subjected to denaturing sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE). N-terminal sequence data revealed exact identity to the first eight residues of the S-layer protein from B. thuringiensis 4045. Gel permeation chromatography of the purified EA1 under nondenaturing conditions revealed a single peak corresponding to a mass of approximately 400 kDa, suggesting that a tetramer or dimer of dimers was the primary species in solution. SDS-PAGE of EA1 purified in the absence of protease inhibitors revealed specific proteolytic processing to an 80-kDa form, which immunoreacted with polyclonal anti-EA1 **antibodies**. This proteolytic cleavage of EA1 to 80 kDa was duplicated with purified EA1 and the protease trypsin or pronase.

(FILE 'USPATFULL' ENTERED AT 10:20:08 ON 26 MAR 2002)
L14 38 SEA FILE=USPATFULL ABB=ON PLU=ON ((BACILL? OR B)(W)ANTHRACIS)(S)(ANTIBOD? OR MOAB OR MAB)
L15 4 SEA FILE=USPATFULL ABB=ON PLU=ON L14(S)(SURFACE(1W)(PROTEIN OR POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE))

L16 3 L15 NOT L5

L16 ANSWER 1 OF 3 USPATFULL

ACCESSION NUMBER:	97:56537 USPATFULL
TITLE:	Non-reverting live bacterial vaccines
INVENTOR(S):	Stocker, Bruce Arnold D., Portola Valley, CA, United States
PATENT ASSIGNEE(S):	The Board of Trustees of the Leland Stanford Junior University, Stanford, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5643771		19970701
APPLICATION INFO.:	US 1994-293407		19940819 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-16579, filed on 10 Feb 1993, now abandoned which is a continuation of Ser. No. US 1991-745876, filed on 16 Aug 1991, now patented, Pat. No. US 5210035, issued on 11 May 1993 which is a continuation-in-part of Ser. No. US 1985-798052, filed on 14 Nov 1985, now patented, Pat. No. US 4837151, issued on 6 Jun 1989 which is a continuation-in-part of Ser. No. US 1984-675381, filed on 27 Nov 1984, now patented, Pat. No. US 4735801, issued on 5 Apr 1988 which is a continuation-in-part of Ser. No. US 1982-415291, filed on 7 Sep 1982, now patented, Pat. No. US 4550081, issued on 29 Oct 1985 which is a continuation-in-part of Ser. No. US 1980-151002, filed on 19 May 1980, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Hutzell, Paula K.
ASSISTANT EXAMINER:	Minnifield, N. M.
LEGAL REPRESENTATIVE:	Trecartin, Richard F.Flehr Hohbach Test Albritton & Herbert LLP
NUMBER OF CLAIMS:	21
EXEMPLARY CLAIM:	1
LINE COUNT:	1871

AB Live vaccines are provided and methods for preparing the live vaccines for protection of a host from a pathogenic microorganism. The vaccines are prepared by introducing at least one modification in a gene involved in at least one, normally at least two, biosynthetic pathways involving the production of products which are unlikely to be found in the disease susceptible host. The modification results in a gene change which cannot be repaired by a single step, e.g. polynucleotide deletions and inversions. Where the aro gene suffers such a change, the resultant auxotrophic mutants require aromatic amino acids, p-aminobenzoic acid and 2,3-dihydroxybenzoic acid or a highly concentrated source of absorbable iron. The auxotrophic mutations have substantially reduced or nonexistent virulence while retaining the desired immunogenicity to initiate the immunogenic response. Various techniques can be employed for providing the desired change.

INCL INCLM: 435/172.300
INCLS: 435/172.100; 435/253.100; 435/245.000; 435/252.300;

435/252.800; 435/252.400; 435/252.100; 435/243.000;
435/252.000T; 435/071.100; 424/184.100; 424/093.100;
424/258.100; 424/234.100; 424/240.100; 424/249.100;
424/282.100
NCL NCLM: 435/473.000
NCLS: 424/093.100; 424/184.100; 424/234.100; 424/240.100;
424/249.100; 424/258.100; 424/282.100; 435/071.100;
435/243.000; 435/245.000; 435/252.000; 435/252.100;
435/252.300; 435/252.400; 435/252.800; 435/253.100;
435/477.000

L16 ANSWER 2 OF 3 USPATFULL
ACCESSION NUMBER: 93:37669 USPATFULL
TITLE: Non-reventing live vaccines
INVENTOR(S): Stocker, Bruce A. D., Portola Valley, CA, United States
PATENT ASSIGNEE(S): Board of Trustees of Leland Stanford Jr. University, Palo Alto, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5210035		19930511
APPLICATION INFO.:	US 1991-745876		19910816 (7)

DISCLAIMER DATE: 20050405
RELATED APPLN. INFO.: Continuation of Ser. No. US 1988-170727, filed on 21 Mar 1988, now patented, Pat. No. US 5077044 which is a continuation-in-part of Ser. No. US 1985-798052, filed on 14 Nov 1985, now patented, Pat. No. US 4837151 which is a continuation-in-part of Ser. No. US 1984-675381, filed on 27 Nov 1984, now patented, Pat. No. US 4735801 which is a continuation-in-part of Ser. No. US 1982-415291, filed on 7 Sep 1982, now patented, Pat. No. US 4550081, issued on 29 Oct 1985 which is a continuation-in-part of Ser. No. US 1980-151002, filed on 19 May 1980, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Nucker, Christine M.
ASSISTANT EXAMINER: Stucker, Jeffrey
LEGAL REPRESENTATIVE: Flehr, Hohbach, Test, Albritton & Herbert
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
LINE COUNT: 1708
AB Live vaccines are provided and methods for preparing the live vaccines for protection of a host from a pathogenic microorganism. The vaccines are prepared by introducing at least one modification in a gene involved in at least one, normally at least two, biosynthetic pathways involving the production of products which are unlikely to be found in the disease susceptible host. The modification results in a gene change which cannot be repaired by a single step, e.g. polynucleotide deletions and inversions. Where the aro gene suffers such a change, the resultant auxotrophic mutants require aromatic amino acids, p-aminobenzoic acid and 2,3-dihydroxybenzoic acid or a highly concentrated source of absorabable iron. The auxotrophic mutations have substantially

reduced or nonexistent virulence while retaining the desired immunogenicity to initiate the immunogenic response. Various techniques can be employed for providing the desired change.

INCL INCLM: 435/172.300
INCLS: 424/087.000; 424/092.000; 435/172.100; 435/245.000; 435/879.000; 435/252.300; 935/001.000; 935/009.000; 935/031.000; 935/058.000; 935/065.000; 935/072.000
NCL NCLM: 424/235.100
NCLS: 424/234.100; 424/249.100; 424/253.100; 424/255.100; 424/256.100; 424/258.100; 435/245.000; 435/252.300; 435/441.000; 435/476.000; 435/879.000

L16 ANSWER 3 OF 3 USPATFULL

ACCESSION NUMBER:	91:106096 USPATFULL
TITLE:	Novel non-reverting shigella live vaccines
INVENTOR(S):	Stocker, Bruce A. D., Portola Valley, CA, United States
PATENT ASSIGNEE(S):	The Board of Trustees of the Leland Stanford Jr. University, Palo Alto, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5077044		19911231
APPLICATION INFO.:	US 1988-170727		19880321 (7)
DISCLAIMER DATE:	20050405		

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1985-798052, filed on 14 Nov 1985, now patented, Pat. No. US 4837151 which is a continuation-in-part of Ser. No. US 1984-675381, filed on 27 Nov 1984, now patented, Pat. No. US 4735801 which is a continuation-in-part of Ser. No. US 1982-415291, filed on 7 Sep 1982, now patented, Pat. No. US 4550081, issued on 29 Oct 1985 which is a continuation-in-part of Ser. No. US 1980-151002, filed on 19 May 1980, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Nucker, Christine
ASSISTANT EXAMINER:	Stucker, Jeffrey
LEGAL REPRESENTATIVE:	Rowland, Bertram I.
NUMBER OF CLAIMS:	13
EXEMPLARY CLAIM:	10
LINE COUNT:	1680

AB Live vaccines are provided and methods for preparing the live vaccines for protection of a host from a pathogenic microorganism. The vaccines are prepared by introducing at least one modification in a gene involved in at least one, normally at least two, biosynthetic pathways involving the production of products which are unlikely to be found in the disease susceptible host. The modification results in a gene change which cannot be repaired by a single step, e.g. polynucleotide deletions and inversions. Where the aro gene suffers such a change, the resultant auxotrophic mutants require aromatic amino acids, p-aminobenzoic acid and 2,3-dihydroxybenzoic acid or a highly concentrated source of absorbable iron. The auxotrophic mutations have substantially reduced or nonexistent virulence while retaining the desired

immunogenicity to initiate the immunogenic response. Various techniques can be employed for providing the desired change.

INCL INCLM: 424/092.000
INCLS: 435/034.000; 435/172.300; 435/252.300; 435/252.100; 935/055.000; 935/072.000
NCL NCLM: 424/235.100
NCLS: 424/234.100; 435/034.000; 435/252.100; 435/252.300; 435/473.000

[redacted] ENTERED AT 10:22:23 ON 26 MAR 2002)
L17 1027 SEA FILE=MEDLINE ABB=ON PLU=ON "BACILLUS ANTHRACIS"/CT

L18 57843 SEA FILE=MEDLINE ABB=ON PLU=ON ANTIBODIES/CT
L19 4 SEA FILE=MEDLINE ABB=ON PLU=ON L17 AND L18

L19 ANSWER 1 OF 4 MEDLINE
AN 72253413 MEDLINE
TI Antigenic determinants of proteins of defined sequences.
AU Benjamini E; Michaeli D; Young J D
SO CURRENT TOPICS IN MICROBIOLOGY AND IMMUNOLOGY, (1972) 58 85-134.
Ref: 228
Journal code: DWQ; 0110513. ISSN: 0070-217X.

L19 ANSWER 2 OF 4 MEDLINE
AN 70127297 MEDLINE
TI [B. anthracis antigens in the gel precipitation reaction with anthrax precipitating serum and globulin of therapeutic serum]. Izuchenie antigenov B. anthracis v reaktsii pretsipitatsii v gele s sibireiazvennoi pretsipitiruiushchei syvorotkoi i globulinom lechebnoi syvorotki.
AU Fedotova Iu M
SO ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, (1969 Nov) 46 (11) 102-5.
Journal code: Y9O; 0415217. ISSN: 0372-9311.

L19 ANSWER 3 OF 4 MEDLINE
AN 70032899 MEDLINE
TI Immunochemical studies on the poly-gamma-D-glutamyl capsule of Bacillus anthracis. VI. The in vivo fate and distribution to immunized rabbits of the polypeptide in immunogenic and nonimmunogenic forms.
AU Roelants G E; Whitten L F; Hobson A; Goodman J W
SO JOURNAL OF IMMUNOLOGY, (1969 Nov) 103 (5) 937-43.
Journal code: IFB; 2985117R. ISSN: 0022-1767.

L19 ANSWER 4 OF 4 MEDLINE
AN 69291443 MEDLINE
TI Some properties of so-called anticapsular sera used in the immunofluorescent reaction with capsules of B. anthracis.
AU Franek J; Kubin V
SO JOURNAL OF HYGIENE, EPIDEMIOLOGY, MICROBIOLOGY AND IMMUNOLOGY, (1967) 11 (3) 325-9.
Journal code: IEV; 2985116R. ISSN: 0022-1732.

[redacted], MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, USPATFULL' ENTERED AT 10:23:23 ON 26 MAR 2002)
L20 24027 S LEE B?/AU

L21 415 S FLORES B?/AU — Author(s)
L22 137 S VALKIRS G?/AU
L23 2 S L20 AND L21 AND L22
L24 2 S L20 AND (L21 OR L22)
L25 2 S L21 AND L22
L26 24575 S L20 OR L21 OR L22
L27 3 S L26 AND ANTHRACIS
L28 3 S L23 OR L24 OR L25 OR L27
[redacted] DUP REM L28 (1 DUPLICATE REMOVED)

L29 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2001:507824 CAPLUS
DOCUMENT NUMBER: 135:104688
TITLE: Assays for detection of Bacillus **anthracis**
INVENTOR(S): **Lee, Bruce Andrew; Flores, Becky Mar; Valkirs, Gunars Edwin**
PATENT ASSIGNEE(S): Biosite Diagnostics, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049823	A2	20010712	WO 2001-US358	20010104
WO 2001049823	A3	20011220		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-174901P P 20000106
AB This invention provides novel methods, reagents, and kits that are useful for detecting B. **anthracis**. The methods are based on the discovery of binding agents, including recombinant polyclonal antibodies, which bind to the surface array protein of B. **anthracis**.

L29 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1980:206555 BIOSIS
DOCUMENT NUMBER: BA69:81551
TITLE: MICROBIAL CONTAMINATION IN THE ATMOSPHERE IN SEOUL KOREA METROPOLITAN AREA AND ITS CONTROL.
AUTHOR(S): **LEE B H**; YOO K H; KIM Y J; **LEE B K**; JUHN Y M; OH J W
CORPORATE SOURCE: LAB. APPL. MICROBIOL., INST. APPL. SCI., KON KUK UNIV., SEOUL, S. KOREA.
SOURCE: KOREAN J MICROBIOL, (1979 (RECD 1980)) 17 (2), 65-71.
CODEN: MIHCAR. ISSN: 0440-2413.

FILE SEGMENT: BA; OLD
LANGUAGE: Korean

AB Microbe frequency around dwelling spaces and the environment in Seoul, Korea were studied. Of 29 bacteria species 1931 strains are isolated in dwelling spaces. Among these isolates are Staphylococcus aureus and Bacillus **anthracis**, which are human pathogens. Of the 13 fungi species, 76 strains are isolated. Highest frequency is confirmed for Aspergillus fumigatus, the pathogen for aspergillosis. The places where the species composition and abundance are highest are coffee shops, lunch counters and office rooms, while factory districts are lower than expected. Leaking oil, 0.1% HgCl2 and telephone disinfectant are better than any other fungicidal agent.

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FILE 'HOME' ENTERED AT 10:30:18 ON 26 MAR 2002

HPS Trailer Page
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WEST

UserID: pbaskar

Printer: cm1_8e12_gbelptr

Summary

Document	Pages	Printed	Missed	Copies
US006448016	21	21	0	1
Total (1)	21	21	0	-